Gender Issues in Design and Technology in the Primary School

Thesis

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Abstract

Design and technology is a relatively new subject in the primary school curriculum and, although it is believed to be important in aiding national prosperity through technological progress, there is little to be found about it yet in the research literature. Experience of the curriculum in general is a dominant feature of school life – particularly since the introduction of the National Curriculum – and yet it is not a developed area of research, either.

This is a pro-feminist ethnographic study that begins to address these gaps in the literature. It explores how children in their final year in a primary school approach their work in this curricular area and how they use it in the construction of their own gender identities.

This dissertation demonstrates how pupils articulate a discourse of equal opportunities whilst subjected to the powerful discourse of gender dichotomy. It shows how children demarcate boundaries between the sexes and have ways of keeping each other on the correct side of the gender divide.

Popular cultural resources such as sport, music and television play an important part in children's lives. The children in this study take images and ideas from these cultural resources as well as other aspects of their lives to use in their classroom work in design and technology and through that to the process of constructing their gender identities. The study concludes with some thoughts on its implications for the future.

Statement

No part of this dissertation or the materials that accompany it have previously been submitted for a degree or other qualification to the Open University or any other university or institution.

Chapter 1 - Introduction

I took up my first teaching post in 1969 at the age of 21 and have taught in primary schools ever since. When I started teaching there was no such subject as design and technology on the timetable but in some schools, such as the one in which I worked, there were after school clubs for the boys to do some woodwork and for the girls to do some needlework. The headteacher, and several of the staff, were close to retirement and equal opportunities or gender issues were never discussed. Fortunately things have changed over those years. For the past nineteen years I have been headteacher (with a heavy teaching responsibility) of a small rural primary school. For some time my interests have centred around gender, social justice and equality issues.

The title of this research project is '*Gender* Issues in Design and Technology' and it has always been my intention to pursue my research from a feminist, or pro-feminist (Lingard and Douglas 1999), perspective. Feminist research puts the social construction of gender at the centre of the enquiry (Lather 1988), and the centre of my enquiry is how children use one small area of the curriculum in the construction of their gender identities. I believe that this is an underdeveloped area for research, because although there is a growing body of work on primary school children and gender identities (e.g. Francis 1998; Renold 2000; Swain 2000; Skelton 2001) the use of the primary school curriculum in the construction of gender has been neglected. I hope that this study will make a useful contribution to knowledge in this underdeveloped area.

It has been suggested that gender is the most fundamental and influential of the dualisms in modern methodological arguments in academic research (Oakley 2000). In this report of my research I

shall be discussing the notions of plural masculinities and femininities (Paechter 1998) and how they can change as society changes (Connell 1996). However, I am not trying to identify changes in society (I do not have an accurate enough picture of the past to be able to be able to do that) but to discover what children at the end of their primary school years, in 2001-2002, think of one particular subject area and then try to understand how they use this curriculum area in their construction of narratives of themselves. I have tried to identify how pupils and teachers use design and technology lessons as a means of building and maintaining their own gender identity, sometimes opening up choices to more complex and ambiguous identities but also policing the boundaries of that identity and coaxing others to conform to it.

Design and technology is a relatively new subject in the primary school curriculum and it, too, is an area that has been neglected by researchers for there is not much to be found about it yet in the research literature. When it was introduced it was seen as an important subject and it is widely believed that expenditure on this area of education is a profitable investment in human capital (Hendley and Lyle 1996; Woodhall 1987; Brown and Lauder 1996). Indeed the British Prime Minister, Tony Blair, believes that it is important for the future prosperity of the country. However notions of human capital are not gender neutral and so if this evidence on gender constructions is ignored we could find that we have reinforced gender stereotypes and made the workforce less flexible and less able to face the challenges of the future. The Design and Technology curriculum is not a neutral medium. Like everything else around them it is a resource with which boys and girls (and their teachers and support staff) construct their individual gender identities.

The skills learned through design and technology are practical and could be useful to the children in later life at home and possibly for

future employment. Tied up with the issues on children's own gender identities there are many issues concerned with preparing young people for the workforce. Schools and children are caught between the raw disciplines of market and state (Ball 1994) and the British government has emphasised that education is central to its industrial policy and fundamental to the country's economic performance. To what extent will the future employees (and potential employers) currently attending St Mark's School see their experiences with design and technology as broadening and extending their career choices or will they feel that in spite of it their opportunities are limited to more traditional roles?

My account of this research begins with the literature review in which I look at recent literature around the issues relevant to this project. For this I looked first at the brief history of design and technology in the primary school and considered the place that it has established as a foundation subject in the National Curriculum. This is followed by a brief look at how teachers have viewed this relatively new arrival in the curriculum and at how it has been seen as a gendered subject in the past (and to some extent still is today). As a man working on a study that was concerned with gender I felt it would be useful to explore some of the issues around men engaging in feminism before considering some feminist perceptions of gender.

Although children in England today attend schools and are taught from a curriculum in which the equal opportunities discourse is encouraged they find that they cannot escape from the powerful discourses of gender dichotomy that are in evidence all around them, for example in the media, and sometimes by the schools themselves (Francis, 1998). It is in this environment that the children construct their own gender identities using whatever comes to hand in the process. Pupils find that they are expected to conform to a regime of compulsory heterosexuality and this in turn leads to the development of a hegemonic, or dominant, masculinity that places females and

other males in subordinate positions (Epstein 1998; Connell 1996; Skelton 1997) and these are all issues that I consider over the next few pages.

Much has been said about boys in schools in recent years. There have been concerns expressed in the media about a perceived under-achievement among boys and so I have explored some of the topical literature on masculinities. I have also looked at how education – and particular aspects of education – can be seen to add to the value of human capital. One important way of increasing this value is seen to be encouraging more girls to take science and technology subjects to a higher level than most do at present. I close the second chapter by outlining my own theoretical framework. In this I describe my own position so that readers of this dissertation can see for themselves the perspective from which I am viewing the children's actions.

The third chapter deals with my methodology in carrying out this study. I explain some of the difficulties for a man trying to carry out feminist research and outline the extent to which I believe that I can justify calling this work a feminist or pro-feminist study. Reflexivity is an important principle of good feminist research (Ramazanoglu with Holland 2002) and so in this chapter I have an opportunity to be reflexive and to explain how I tackled answering questions about how we approach studying gender and how my own theoretical perspective informed my approach.

In the fourth chapter I explain the research methods I used and my reasons for using these rather than others that were available. This is a pro-feminist ethnographic study and the data have been collected by interviewing teachers and pupils, and by observing them in class. There has also been an opportunity to look carefully at some of the relevant documents from the school, such as policy statements. Every research project should be carried out ethically. I have tried to

ensure that that has been true in this case. I explain what steps I took to conform to good practice in this respect.

Chapter Five deals with the study itself. I describe the school, St Mark's in Fordminster, and how I negotiated access to the teachers and pupils. I go on to outline some of the problems that I faced in this work, particularly when the teacher whose class I was using became pregnant and left the school, and how I had to adapt my plans to keep on track. Having done that I describe the initial study that I carried out in the autumn of 1999. I was pleased and encouraged by the initial study because I felt it went well, although it was clear that I still had a lot to learn. So I was really excited when I began work on the main part of this research which took place between the autumn of 2000 and spring of 2002. I describe how I organised the interviews with teachers and pupils and talk about the observations I made in the classroom while the class was engaged in design and technology activities. Sometimes the pupils worked individually and sometimes they collaborated in groups. Occasionally these groups split into sub-groups.

The analysis of my data can be found in Chapter Six. In this chapter I show how the children in this school use a range of popular cultural resources in their own gender constructions. Football has been seen as a key signifier of successful masculinity (Swain 2000) and girls are very often excluded from games. I show how some of the boys use football images in their work to build and develop their own gender identities. But there are other cultural resources that are used in this process and I give examples from music and television as well as more local cultural experiences. My research questions refer to the children's attitudes to design and technology and I found that the children revealed a lot about themselves and their own gender identities when they talked about how they felt about design and technology as a lesson in school and a subject in the National

Curriculum. They were able to talk about the fun they got from their lessons but also expressed some anxieties as well.

St Mark's School is committed to equality of opportunity for its pupils and staff and the teachers and pupils reflected this in their conversations with me. However the gender dichotomy is very strong and so the children often find ways to demonstrate and reinforce their own gender identity by drawing attention to the difference between themselves and those of the other sex. I would like to see people confidently living their lives using any of the resources that are stereotypically attributed as masculine or feminine whatever their biological sex. However it does not seem that this situation is likely to develop in the near future. When children stray from what those around them consider is appropriate behaviour for their sex they are called 'sissies' or 'tomboys' (Thorne 1993) and this is one of the ways that the children attempt to police their friends and keep them on the correct side of the gender divide. I demonstrate how the children at St Mark's have accomplished this.

In the final paragraph I begin to draw the whole project together and outline my conclusions. I sum up what I believe are the gender issues in design and technology in the primary school at the beginning of the twenty-first century and consider what the implications of my findings are for the future.

Research Questions

1. What are the attitudes that children and their teachers in my study school have about design and technology?

- Do boys have different attitudes from girls?
- Are there different attitudes between boys and between girls?
- To what extent are the teachers positive in their attitudes to the subject? (i.e. to what extent do they feel that all the skills and knowledge of design and technology are useful, important and

relevant to both boys and girls in primary schools and how confident do they feel about teaching it?)

2. To what extent do teachers and pupils see design and technology as a gendered subject?
3. What are the factors that have influenced these views?

Chapter 2 - Literature Review

Design and Technology

> "Design and technology prepares pupils to participate in tomorrow's rapidly changing technologies. They learn to think and intervene creatively to improve the quality of life. [...] Through design and technology, all pupils can become discriminating and informed users of products, and become innovators." (DfEE/QCA 1999:15)

Design and technology is a relatively new subject in primary schools in England. Few, if any, primary schools used the expression before the National Curriculum (NC) introduced it, even if they had taught the skills and knowledge that are included in the NC Order for the subject. Before 1990 there was no requirement for primary pupils to study design and technology and it was usually subsumed under 'Art and Craft' (John and Thomas, 1997).

The antecedents of Technology (e.g. woodwork, metalwork, domestic science, needlework and craft) have in the past been gendered. The boys' grammar school that I attended between 1959 and 1966 offered woodwork, metalwork and technical (engineering) drawing but no needlework or domestic science while the neighbouring girls' grammar school offered needlework and domestic science, but no woodwork or metalwork. In the arrangement that I inherited when I first went to my present (two-class) school in 1983, for one afternoon each week all the girls would do 'needlework' with the infant-class teacher (a woman) and all the boys would do 'craft' with the headteacher (a man). I very quickly changed this arrangement so that (over a period of time) all the children did all the activities in mixed groups.

Not only is design and technology new, but it is changing rapidly both within and beyond education (DES, 1990;SCAA, 1995; DfEE/QCA 1999). Because of this rate of change there could well be a wide variation in individuals' understandings of what is meant by 'design and technology' – wider, possibly, than for other areas of the curriculum. Rennie and Jarvis (1995) suggested that because the word 'technology' conjures up different images in different minds, teachers should consider their pupils' perceptions of technology in their planning. The situation is further confused in that it has a different profile in different parts of the English-speaking world. For example, in Australian primary schools design and technology is part of a subject known as "Science Technology" (Board of Studies, 1997). In the USA it comes under the Art curriculum. (Literature about 'technology in education' in that country refers solely to what is known in England as 'information and communications technology' or as an aid to teaching rather than as a curriculum subject (Prawd, 1996; Rogers, 1997; Maurer and Davidson, 1999). Information Technology, which made up twenty per cent of the original Technology curriculum and attracted much of the interest (and financial support) is now a National Curriculum subject in its own right. This could be a threat to the future of design and technology although there is no evidence of this at the present. A greater threat has possibly come from the National Literacy and Numeracy strategies and primary school Key Stage Two Performance Tables which have given Reading, Writing and Mathematics even higher profiles. It is possible that teachers have concentrated on these skills to the detriment of those required for other subjects such as design and technology which traditionally, as well as being gendered, has been positioned as a marginal subject reserved for the less able (Paechter 1998).

For this project I am using 'design and technology' as described by the National Curriculum' for England (DfEE/QCA, 1999), but clearly in many cases I will not be sure how others in the literature have

defined it. In an effort to avoid misunderstandings I asked the interviewees in each of my interviews to explain what design and technology meant to them.

Teachers Perceptions of Technology

Design and technology has been a compulsory subject in primary schools since 1990 and there has been a great deal of confusion among teachers about what it is and what it should be. It has been reported that one of the main problems experienced by teachers in England and Wales was unfamiliarity with terms such as 'technology' and 'design' (Davies 2000). Similarly it has been said that teachers in Australia have not yet developed a full understanding of 'technology' as many see 'technology' as only referring to computers (Board of Studies 1997) as in the American use of the word. Rennie and Jarvis (1995) have suggested that primary teachers' lack of knowledge about the subject was likely to be an impediment to its successful introduction. A later study (Jarvis and Rennie 1996) found that teachers seemed to be confused about matching their everyday understanding of technology with that of the National Curriculum while over ten per cent were reported as making negative comments about the subject. Although teachers' confidence in teaching technology is rising because of a growing familiarity with the subject it is still said to be lower than for any subject except music (Harlen 1997). It may be slow to improve further because some primary schools were teaching less technology in 2000 than they were before the National Curriculum appeared (Davies 2000).

Gender Perceptions of Technology

There does not seem to be much evidence available of the gender perceptions of school subjects among primary school pupils (possibly because for many years many primary schools worked on cross-curricular topics), but studies among secondary school pupils

have consistently found evidence of gender stereotyping (e.g. Weinreich-Haste, 1981; Archer and Freedman 1989; Archer and MacRae 1991). However others (Colley and Coomber 1994) have found less evidence of this among younger secondary pupils and those who attend single sex schools.

Weinrich-Haste (1981) asked 13-14 year-olds and university students to rate their school subjects on a six-point scale for a range of qualities including masculine-feminine. She discovered that cooking, typing and woodwork were the most strongly sex-typed subjects by both girls and boys and by the students. Archer and Freedman (1989) carried out a similar study with A-level students considering just the academic subjects. They found that all the subjects (apart from German which was thought to be neutral) were considered to be either masculine or feminine and Engineering (the only element of technology included in the study) was identified most consistently as a masculine subject. More recent evidence suggested that academic subjects could still have strong gender meanings (Connell 2000). However, Archer and MacRae (1991) working with younger children (Year 7 pupils) on a similar study reported that 60 per cent of their sample rated each subject as neutral apart from craft design technology, information technology, typing and home economics; with craft design technology and information technology being considered to be masculine and typing and home economics considered to be feminine. I believe that my study will be a useful addition to current knowledge by identifying the perceptions of younger children.

Technology and people's perceptions of the subject have changed a great deal and there have been signs of a growing female interest in some craft subjects (McCarthy and Moss 1990). However, it is said that girls continue to be under-represented in technology A-level (Siraj-Blatchford 1995) and many secondary school girls have a negative attitude to the subject (Harding 1997; John and Thomas

1997). There have been suggestions that this negativity begins in the primary school (Egan 1990) and consequently schools have been urged to change this situation (Sherwin 1990; Browne and Ross 1991). More recently it has been found that technical competency is still defined in highly gendered terms so that young women still experience the hammer as a male tool and the design workshop as a male space (Clegg et al 1999).

Several of these studies were carried out before the introduction of design and technology in the National Curriculum in 1990. Prior to its introduction primary school children rarely had the opportunities to use the wide range of materials or develop their skills in posing and solving practical problems that the subject demands (Rennie and Jarvis 1995). Primary school children in England largely associate 'technology' with designing and model-making in the classroom whereas children in Australia (where it is taught as 'science and technology') formed their ideas about technology from out-of-school sources such as family conversations and television programmes (Rennie and Jarvis 1995).

Some Feminist Perceptions on Gender Relations

Weiner (1994) has pointed out that feminism has a very long history going back over two thousand years, although the term "feminism" first appeared in the 1890s. With Madeleine Arnot she identified what they thought were the feminist perspectives which had made most impact on education: liberal feminism, radical feminism and marxist/socialist feminism (Arnot and Weiner 1987). These are commonly thought of as 'modernist' or 'traditional' feminism (Zalewski 2000). However she soon realised that this was an over-simplification (Weiner 1994).

Flax (1990) demonstrates that there is no consensus amongst feminist theorists about what gender is, and how it is related to biological sex, sexual orientation and other social relationships such as class and race. Oakley (2000) developed the concept of gender as a means of differentiating between biological sex and the more cultural forms of masculinity and femininity in the 1970s. This has been a very useful concept but John Hood-Williams (1996), a man, has shown that biological sex is itself a cultural construction. This does not mean that 'sex' and 'gender' are two terms for the same thing, but that we need to be just as careful using the word 'sex' as we are with the word 'gender' (Yuval-Davis 1997). Nevertheless there is clearly a link between biological sex and gender, but this does not mean that there is a biological basis for masculinity (Connell 1996) or indeed femininity. There is no one standard pattern of masculinity that is found everywhere, nor is there any universal women's experience (Francis 1999). On the contrary, more than one kind of masculinity can be found within a single cultural setting (e.g. there are subordinated masculinities such as homosexuality) and masculinities can change for they are the ways that societies interpret and employ male bodies (Connell 1996). We do experience gender in our bodies, for example in the ways we sit and walk - so that sitting with legs together is said to show correct femininity in women but weakness in men (Davies 1993) - but this is because bodies are drawn into social life and become involved in constructing our social worlds, not because our bodies determine our social lives (Connell 1997).

Socialist feminists have suggested that the capitalist organisation of production and the sexual division of labour have led to gender divisions (Flax 1990) but this overlooks the reality that class, gender and ethnicity overlap and oppressive power relationships occur for many reasons. They are not dependent on gender for they can exist between women (Francis 1998). Indeed not all men benefit from this system for the poor man's experience may be significantly different

from the big employer's (Connell 1993). It has also been observed that people who find themselves in a weak or negative position because of their race or gender, in relation to the dominant discourse of their culture, often adopt this negative position as their own and actively construct identities which confirm the validity of the discourse which has led to their oppression (Golden 1996). So because they cannot imagine any alternative way of being, oppressed people identify with the position in which they have been situated by those who wish to oppress them, just as women whose own feet had been bound would bind the feet of small girls.

Language has been seen as a significant element in the construction of genders. Spender rejected the notion that language is neutral and described it as being "Man-made" (Spender 1980) whilst Irigaray claimed that (in French at least) all that has been valued highly has been masculine in gender and all that has been deemed of low value has been feminine (Irigaray 1993). Others have drawn attention to other features of language such as the difficulties caused by the lack of a sex-indefinite third person singular pronoun in English (Bodine 1975; Golden 1996). Flax (1990), however, suggests that if one thinks like this then texts, signs and symbols tend to take on a life of their own and this ignores how ways of life constitute language as much as language constitutes life.

No discussion on feminism can get very far without a mention of postmodernism. Postmodernism is undoubtedly important to the debate because as Richard Edwards says,

> "even if one does not want to locate oneself within postmodernism – itself a problematic notion – it remains important to locate oneself in relation to postmodernism" (Edwards 1998: 460).

Becky Francis has outlined some of the problems that feminists, in particular, have with postmodernism or post-structuralism. She argues that feminist research is emancipatory because it draws

attention to examples of gender inequity and discrimination and tests new more equitable practices to replace them. This is because, for modernists, there is the ultimate core to the self or the subject that inspires them to say what someone or something (e.g. woman) is and should be. However postmodernist feminists would claim that there is no such vital core and thus would prefer to ask how women become or "get said" (Zalewski 2000: 24). As Davies put it:

> "A post-structuralist analysis does not invent a new structure to replace the old, but provides insights into the discursive mechanisms which hold the existing structures in place." (Davies 1993:198)

The notion that women and men are equal is not created by Enlightenment values; rather Enlightenment values (including equality of women) are historical social constructions (Scheurich 1997). One difficulty of this for some people is that, although post-structuralist theory is useful in revealing how gender discourses and identities are perpetuated and taken up, this usefulness is limited because it suggests nothing to take their places (Hartsock 1987) so it can seem easier to see what it is against rather than what it is for (Usher and Edwards 1994). Bordo (1990) argues that most post-structuralist thought (in particular the work of Foucault) is better understood as

> "offering interpretive *tools* and *historical* critique rather than frameworks for wholesale adoption" (Bordo 1990;154).

But then, as Foucault pointed out (Burr 1995), history has shown how changes that appeared to be for the better at the time have sometimes turned out to have undesirable consequences.

Even those who are interested in the implications of postmodernism for feminist education confess to being perplexed by the impenetrability of its jargon (Middleton 1995), and Stronach and MacLure concede that the language of postmodernism is commonly described as "esoteric" (Stronach and MacLure 1997: 15). I will

return to this debate later in this chapter in the section about my own theoretical perspective because the relationship between feminism and postmodernism is very relevant to this study.

Although I find that I am one who often needs to have a dictionary close at hand whilst reading the discussions about the usefulness, or desirability, of postmodernism in feminist research, there are certain concepts from postmodernism that I find very useful. I am very excited – indeed curiously re-assured – by the notion that there is no foundational position, no 'one real truth' out there somewhere just waiting to be discovered. Instead there are many truths and we should be interrogating all the ways that truth claims are made because truths and knowledge are not neutral; they are complex, ambiguous and saturated with politics (Griffiths 1995). Each of us brings our own truths from our past experiences to all we do. The idea is not to free women and girls from oppression or *oppressive* identities because all identities can be oppressive (Zalewski 2000). Meanings of masculinity and femininity change between different languages, cultures and historical periods. No one should be able to attach a label to someone else declaring what he or she should not be – although we probably do it all the time when we position others in relation to ourselves. The point is that we should not be surprised when others reject our positioning of them for in any interchange between people there is a constant reappraisal of the situation (Burr 1995). It can be very uncomfortable, though, when one realises that it means one has to question ones own beliefs about equality and freedom, for example.

Equality of Opportunity

In the introduction to the NC documents we can read,

> "Equality of opportunity is one of a broad set of common values and purposes which underpin the school curriculum and the work of schools"

(DfEE/QCA, 1999: 4).

Thus the design and technology curriculum, as it is described in this document, is seen as a 'gender neutral' subject (as are all other NC subjects). However governments can stimulate but not impose gender equality (Volman and Ten Dam, 1998) and there is much in the literature to suggest that although this may be the intention of the government and teachers in the schools, this objective is distorted because the pupils use design and technology, along with their other activities, to construct their own identities (while their teachers are using it to construct their own).

Although the promotion of equal opportunities has not, in itself, been a major national policy (Orr 2000), British governments over the last twenty-five or so years have made some attempts to apply themselves to gender issues (Myers 2000). Schools have been encouraged to develop and implement Equal Opportunities Policies and the National Curriculum sets out a common curriculum for boys and girls that is underpinned by the concept of equality of opportunity (QCA 1999). Although some teachers will have been involved in the creation of policy at national level, in practice most teachers are readers of texts that have been produced by others. Each will take from the text what he or she wants to take from it. Obviously some teachers and headteachers will be more disposed to reform than others, and it will be these teachers who bring about the gender reform in individual schools that will affect individual children (Kenway et al 1994). Some will ignore or just pay lip-service to these aspirations because we are working within a broader culture that does not necessarily share these values and consequently the objective of equal opportunities for all is still relevant. St Mark's Primary School, the focus school for this project, also has policies that promote equal opportunities with the expressed aim of enabling all pupils to reach their full potential. The policies state that they have been drawn up in the recognition that underlying inequalities have been present in society in general.

> "This in turn means that, in order to fulfil our aims,
> we need to take more positive action to counterbalance
> the inequalities within society and the world at large,
> and we need to be aware of the ways we ourselves may
> contribute to those inequalities."
>
> (Appendix A)

Equality of opportunity has generally been seen as an element of Liberal Feminism (Middleton 1984; Zalewski 2000) and it could only be achieved by eliminating sex-role stereotypes through education that changes the attitudes of teachers, pupils, parents and employers (Middleton 1984). The children in this study, like those with whom Becky Francis (Francis 1998) worked are aware of the equal opportunities discourse and its influence in their school. Francis found that children frequently referred to equal opportunities in their discussions of gender and adult work and the children at St Mark's defend their right to a common curriculum; vigorously condemning the unfairness of the system under which their parents were educated.

Back in the eighteenth century Mary Wollstencraft argued that girls should have the same education as boys, and as recently as the 1960s women in the UK were not paid the same wages or salary as men doing exactly the same job (Zalewski 2000) so it would seem that there has been some progress. There are those who would say that there has been too much change and that it is now boys and men who are losing out. We need to be aware of a media-constructed discourse on male disadvantage that has shifted the language of educational inequality and reframed it to suit the purposes of the politically reactionary men's rights movement (Weiner et al 1997; Jackson 1998). However with news reports still showing that women earn significantly less than men, because more of the low-pay jobs are done by women, there is little scope for complacency.

I would not wish to promote a society in which everyone looked and acted the same. My notion of equality is that everyone can be genuinely free and have the flexibility to be themselves without being stigmatised. Like Francis I would wish to find myself in a situation where people would be able to behave in ways that we have traditionally defined as masculine or feminine but these positions would no longer be gendered so that society would incorporate endless diversity rather than sameness (Francis 1998). It is not going to be easy to achieve.

The Gender Dichotomy

It would seem that people need to know whether those around them are male or female. People are uncomfortable with androgyny and look for superficial clues (e.g. hairstyle and clothing) so that they can make attributions of male or female – even if they are wrong - to those they meet (Griggs 1998; Paechter 1998). Although the equal opportunities discourse presented to them by their teachers has had a strong influence on children's constructions of gender, it is the discourse of gender dichotomy that children draw on most when constructing their own gender identities (Francis 1998). Early childhood research into children's gender beliefs and behaviour has shown that most children have adopted a gender identity by the age of two years old, but even when they start school they are still unsure about what behaviour is appropriate for their own group (Jordan 1995). Therefore they look to adults and their peer group to clarify the situation on how to develop their own gender identities. They find that in spite of being told that society considers gender inequality to be wrong, their own experience shows them that gender is an important category for constructing that society (Volman and Ten Dam 1998). Delamont (1990) asserted that schools played an active role in developing and reinforcing gender stereotypes, but the equal opportunities initiatives were introduced to change that. Although the

children at St Mark's show there has been some success in this, we still find gender embedded in the institutional arrangements through which schools function, such as uniforms and dress codes, language codes and the unrepresentative number of men in positions of authority (Connell 1996). Some teachers of all age groups of children still use gender as a means of controlling their pupils – for example trying to shame boys by telling them that they are 'acting like a girl' (Connell 2000).

However, the ideas that I find most useful in this area are the ones that show how children themselves construct their identities as being different from children of the other sex. Children come to school knowing that they are girls or boys but are unclear about what sort of behaviour is expected of them. Gender is not imposed on them from without but constructed by them in interaction with one another. Of course this does not happen in a vacuum and the children will be aware of the roles that those around them play. Even where teachers have sought to transcend the male/female dualism and create a non-gendered environment in their schools the children have determinedly sorted themselves by sex (Jordan 1995). I have observed this in my own research, for example, where there was an occasion when the teacher had explicitly created mixed groups but the children just divided themselves into single-sex sub-groups. In the primary school context, the worst thing a boy can be called is a 'girl' (Epstein1998) and so we find that little boys adopt a definition of masculinity as avoiding whatever is done by girls (Jordan 1995). Barrie Thorne (1993) found that children sometimes construct 'the girls' and 'the boys' as rival groups and she maintains that we continually create and recreate gender relations through social interaction and collective practices.

Compulsory Heterosexuality

An issue that I would imagine is rarely, if ever, discussed openly in schools is children's sexuality, yet Carolyn Dixon has identified a developing theoretical awareness of the centrality of sexuality to individual identity (Dixon 1997). The boy in her study uses tools and materials to simulate a sexual act during a design and technology lesson. Girls in my own school have complained to a female teacher of boys in Year 6 who simulate masturbation in the classroom in view of girls but out of sight of the teacher. Debbie Epstein has argued that schools are highly sexualised sites where the youngsters' struggles around sexuality permeate their lives. They find it a struggle and confusing because sexuality is an issue of consuming interest to them whilst as the same time it is a taboo subject. She suggests that to develop a full understanding of gender relations in school one should examine them in the context of compulsory heterosexuality (Connell 1995; Epstein 1997). Her research for this particular paper was with a group from the Birmingham Black Lesbian and Gay Group and her conclusion was that misogyny and homophobia are so intertwined as to be inseparable. It has been shown how in some secondary schools boys who do not participate in hyper-heterosexual practices of masculinity (e.g. they worked hard at school or exposed sexual vulnerabilities in relationships with girls) were ridiculed through humorous rituals (Kehily and Nayak 1997; Golden 1996). Children from my own school have used the word 'gay' as a form of abuse and I know from colleagues in other schools that this, and to a lesser extent 'lezzie', is quite common. Teachers of my acquaintance are reluctant to talk to pupils about homosexuality through a combination of ignorance, embarrassment and fear of parental complaints. Section 28 of the Local Government Act which made it illegal for local funds to be used to promote homosexuality as a pretended family relationship is also likely to have discouraged teachers from discussing homosexuality in the classroom.

Carrie Paechter has drawn our attention to an interesting example of compulsory heterosexuality in society. Transsexuals are required to show surgeons and psychiatrists that they really are of the opposite gender to their biological sex to be accepted for surgery. In practice this means that they must explicitly conform to stereotypical gender roles for it is assumed that a male-to-female transsexual would not change sex to become a lesbian (Paechter 1998; Griggs 1998).

Emma Renold shows how boys and girls in the primary school are subject to the pressures of compulsory heterosexuality. Displays of sexual awareness by Year 6 girls during the school day did cause concern to the teachers, but in the context of the school disco the girls took delight in the projection of their desirability. However, they found the constant negotiation of being seen as fashionably attractive without being labelled a 'tart' difficult to maintain (Renold 2000). Renold found the girls were imaginative in transforming their school uniforms to reflect high street fashion and some found their positions as 'girlfriends' and their heterosexual knowledge as particularly powerful. I show in this study how girls and, more noticeably, boys use their design and technology products in the construction of their own genders.

It is important that we are aware of the sexual cultures embodied in family life, schooling, training and work. Mac an Ghaill (1999) has suggested that British society is underplaying sexual politics and this is making it more difficult for us to understand the changes in our society. One of the more obvious dangers of this is that it leads to simplistic explanations such as "equal opportunities have gone too far" which appeal to certain sections of society and could make new discrimination invisible.

Masculinity

We have seen how some children have constructed their own gender identities as being different from the other. There are potential problems with this for older boys who feel insecure about their own gender identity. Segal has suggested that even a solid masculinity that is "sure of itself" is structured through contradiction and so

> "the more it asserts itself, the more it calls itself into question" (Segal 1990: 193).

If this is so, then it is always unachievable and never complete and thus a pattern of repetitive hyper-masculine performances (against women and gays) could be produced to counter any possibility of homophobic attacks (Nayak and Kehily 1996).

Although most, if not all, schools subscribe to the notion of equality of opportunity and have established practices aimed at reducing gender difference, recent research suggests that schools – including primary schools - are integral in the construction of gender identities (Jordan 1995; Connell 1996; Warren 1997; Connolly 1998; Francis 1998: Skelton 2001). Connell, for example, tells us that they are active influences in the formation of masculinities. He asserts that the overall regimes of schools tend to reinforce gender dichotomy through curriculum divisions, discipline systems and sports (Connell 1996). He is associated with the term 'hegemonic' masculinity which he defines as the form that is culturally dominant in a particular setting. It is not necessarily the most common form of masculinity, but the one associated with leadership and influence. Effective strong groups do not need many leaders, though there will be many that will aspire to leadership. The characteristics most associated with hegemonic masculinity are those involving physical strength, adventurousness, emotional neutrality, assertiveness, competitiveness, discipline, reason, objectivity and rationality. It distances itself from the opposites of these such as physical weakness, emotion, co-operation, compassion and so on (Kenway

and Fitzclarence 1997). Thus violent males draw from this range and exaggerate and glorify these attributes, behaviours and values and show contempt for the values and attributes that they see as feminine.

Skelton (1997) has shown how adult women in schools, conscious of the depth of sexism in society and their own unease at sexual harassment, sometimes ignore, or try to rationalise, boys' violent behaviour towards girls and themselves. Children see that being strong, being a leader and standing up for ones beliefs are qualities that are praised in our society, but women (except in their role as mother) are discouraged from these practices (for they are normally associated with men and masculinities) and a girl learns that when she achieves them she could be criticised (Martin 1998). Primary school girls are reluctant to disclose experiences of sexual harassment because of a fear of conflict, ridicule and embarrassment and so such behaviour is unchallenged and is accepted as 'normal' and 'natural' (Renold 2000).

Football is a very popular activity and topic of conversation with primary aged boys. Indeed some would see it as significant in the construction of the hegemonic masculinities in primary schools (Skelton 2000; Swain 2000). I know from the school in which I work that not all boys are interested in playing football, but the leaders are the ones who do play. Connell shows that pupils are active in the construction of their own masculinities and I have discovered through this research project how boys sometimes use football imagery in their design and technology projects to construct, or at least reinforce, their own masculine identities.

Femininity

Just as there are many forms of masculinity there are also many forms of femininity that people can choose to use in the construction of their own genders. However this does not mean that in practice children necessarily have innumerable choices of which variant of femininity they might assume (Reay 2001a) because there are pressures to conform to the expectations of others. It does mean, though, that they do not need to be passive victims of sex-role stereotypes and can have agency in their own development (Thorne 1993). Some years ago, in a study of fifth-grade girls in the United States, Anyon found some girls conformed to one kind of femininity by wearing dresses and skirts, by being quiet in class and by avoiding aggressive physical activities. Others used another more exaggerated feminine behaviour – giggling, whispering, laughing and blushing as well as flirting and being coy with a male teacher – to avoid schoolwork. There were also some girls who were more assertive and resisted stereotypical femininity by rejecting skirts and wearing clothes that enabled them to be more active (Anyon 1983) for feminine clothing encumbers girls and makes it difficult for them to participate in physical pursuits (Francis 1998). Reay, in her study of a Year 3 classroom in London, identified broad groups of girls that were known as 'Spice Girls', 'Nice Girls', 'Girlies' and 'Tomboys' (Reay 2001a). The membership of the groups was not rigid and did fluctuate and overlap from time to time. Whereas the 'Girlies' and the 'Nice Girls' conformed to the discourse of conventional femininity, the 'Spice Girls' were more aggressive (for example, making one boy cry and following the boys in the playground and marking them out of ten for attractiveness). The 'Tomboys', unlike those in Thorne's study (Thorne 1993), occupied a favoured position in the middle ground on the boundary between the sexes moving easily between friendships with boys and girls.

There have been significant changes in the construction of femininity over the past few decades and the particular forms that femininity takes are shaped by the roles that women and girls adopt (Reay 2001b). Popular culture as presented by the broadcasting and print media can be very influential as Proweller explains:

> "the discursive construction of femininity is often a matter of the ways in which girls and women reappropriate and mediate cultural icons of femininity that sweep across popular culture in television, magazines and newspaper advertising."
> (Proweller 1998:13)

The female singing group The Spice Girls symbolised 'girl power' and a notion of active powerful femininity, but many young women found it an ideal that was very difficult to live up to (Walkerdine et al 2001). Gendered positions can vary enormously and women, such as headteachers, who find themselves in senior management posts are caught up in painful struggle of constant reinvention (Walkerdine et al 2001). Class, culture, ethnicity and sexuality can all have an influence on how the girls choose to construct their gender identities (Anyon 1983; Thorne 1993; Renold 2000; Francis 2000; Reay 2001a).

The Year 6 girls in Emma Renold's study were able to construct their femininity by talking about fashionable clothes, styles of shoes, make-up and nail varnish etc. They drew on representations in popular magazines and modified their school uniforms to make them more fashionable. The girls wanted to be seen as in fashion - but not as 'tarts'. Renold found that it was the girls themselves who positioned each other in this way. Girls who resisted these hyper-feminine discourses were denigrated and insulted unless they engaged in heterosexual practices such as kissing in the playground, writing secret love letters or having a boyfriend (Renold 2000). Valerie Hey found that older girls still found it difficult to know what to wear that would comfortably position them between 'tomboy' and

'slag'. They could agonise between wearing trousers and flat shoes that might be interpreted as 'butch' or high heels that might be seen as 'tacky'. However, if they were accepted by their group they concluded that this was evidence that they were

> "performing appropriate forms of femininity"
> (Hey 1997: 130).

Although some girls celebrate their femininity through regard to feminine forms of dress and in the ways they use their bodies (when standing or sitting, for example)(Davies 1993), they do not seem to have activities such as football that they can use as quick shortcuts in their gender construction. It is more profound than this. Femaleness and goodness are interwoven (Davies 1993) so girls construct their femininity as sensible and selfless (Francis 1998), hard working, mature and more socially skilled (Reay 2001a).

> "To be successfully female, then, is not just a matter of outward appearances, but of inner being, of not only organising one's body as female and not male, but also wanting and desiring it that way."
> (Davies 1993: 74)

Although there are claims that primary schools are feminising boys, it is not the school experience that does this but the adherence to a traditional masculinity that deters boys from wanting to succeed so that school work is regarded as girls' work (Foster et al 2001). Indeed boys find that they can strengthen their own masculine identity by rejecting the values of the school that emphasise study and hard work.

Becky Francis is aware of the notion of multiple masculinities and femininities but prefers to think in terms of one masculinity and one femininity

> "constructed as oppositional to one another, and consequently shifting, but flexible, and incorporating

contradiction." (Francis 2000: 15)

Reay maintains that

> "There is a co-dependence between femininities and masculinities which means that neither can be fully understood in isolation from the other."
> (Reay 2001a: 153-154).

Whereas many people talk of a dominant or 'hegemonic' masculinity (see previous section), Reay concludes that the idea of a dominant femininity is an oxymoron because

> "it is dominant versions of femininity which subordinate the girls to the boys."
> (Reay 2001a: 164)

Girls can be assertive and independent in some situations, and, although they may be high achievers, they are often easily controlled by the opinions of boys (Jones 1993). Reay, too, observed that, in spite of the displays of aggression and assertiveness by some of them, all the girls in her study acted in ways that boosted the boys' power whilst sacrificing their own. Thus the girls are trapped by the very contradictions that they need to overcome. Reay stresses that there is

> "an urgent need for work that addresses the construction and performance of femininities."
> (Reay 2001a: 164)

Human Capital

> "Design and technology can help promote enterprise and entrepreneurial skills through identifying an opportunity to design something to meet a specific need, making and marketing the product, and evaluating the whole process. Pupils can find out about manufacturing and explore the work of professional designers both now and in the past." (DTI 2002)

It has been said that schools and teachers are caught between the raw disciplines of market and state (Ball 1994). One of the key reasons for making design and technology a compulsory subject for all children aged five to sixteen years was the perception that Britain's workforce needed more technologists (Hendley and Lyle 1996). It is widely believed that expenditure on education is a profitable investment in human capital (Woodhall 1987; Brown and Lauder 1996; Minehan 1997) and that recent developments in teaching and learning have strong affinities with the development of flexible production methods in industry (Ball 1994) although in the past, technology subjects in schools have often been regarded as having low status (John and Thomas 1997). Vandenberghe (1999) warns, however, that education policy cannot be based solely on human capital theory. This is because, Vandenberghe maintains, human capital theory relies too much on the assumption that schools and teachers do not have aims and objectives of their own and it is too optimistic that the education system will deliver what the government demands.

The GIST (Girls into Science and Technology) Project was an action research project in Manchester which ran from 1979 until 1983 – a time when "masculinity and femininity were constructed across the whole curriculum in schools" (Smail 2000 p148) – to look at pupils' attitudes to science, engineering and technology and to investigate

> "how the gendered nature of subject choice could be affected by changes in teachers' attitudes and behaviour" (Smail 2000: 144).

It was found that even teachers who were enthusiastic about the project were reluctant to change the curriculum or their own teaching strategies to give their subjects a broader appeal to both girls and boys. Consequently little changed because these teachers had 'proved' for themselves that boys did not want to do home economics or domestic science and girls did not want to do craft, design and technology.

A little after this, the WISE (Women into Science and Engineering) campaign was launched (in 1984) to encourage more women to take up science, engineering and technological careers. It was promoted as an equal opportunities initiative, but was sold to employers as a means of addressing a skills shortage (Henwood 1996). It sought to widen girls' choices of career by replacing masculine with more feminine images of these subjects, but there was no special treatment for women in the workplace as this would infringe 'equal opportunities'. Henwood has shown that in spite of this campaign there has not been a significant increase in women seeking these careers and suggests that it is because women still feel that they would be working in a sexist and misogynistic environment where they would have to work twice as hard (as male colleagues) to prove themselves. However, it was found that 'masculine' work was attractive to women because it carries more status and value than 'feminine' work. Men, though, find it deeply threatening to their sense of superiority when women do cross the boundary (Henwood 1996).

Tony Blair, the British Prime Minister, has described Britain as the "design workshop of the world" (Blair 2000) and Stephen Byers, when he was Secretary of State for Trade and Industry, emphasised that education is central to the government's industrial policy and fundamental to the country's economic performance. Because people change jobs more often nowadays skills are at a premium and there are fewer decent jobs for those who lack qualifications (Byers 2001). Neither mentioned how more women would be attracted into the technological industries, but the new Secretary of State for Trade and Industry Patricia Hewitt (who is also Minister for Women) has announced several measures including core funding for the WISE campaign for another three years (Hewitt 2002). These are important developments because if we think about school knowledge in human capital terms, without taking proper recognition of gender constructions, we could actually end up reinforcing gender

stereotypes rather than weakening them. This could inhibit the government from achieving its aim of making the workforce more flexible – more women in the workplace and more men in service industries – because of the strong impact of powerful gender constructions. At present women consistently account for 90 per cent of applicants for textile design courses but only 14 per cent of product/ industrial design courses (Mayfield 1997) so there is still much to do.

Men Engaging in Feminism

I like to describe myself as a feminist, so I am a man engaging (or trying to engage) in feminism. However, like others (Kahane 1998) I feel a great deal of uncertainty about how I, as a white male headteacher in a school where, until recently, I was the only man on the staff can justify describing myself thus. Claiming to be a feminist can earn a man the distrust of feminist women and the scorn of other men (Bartky 1998) and it is very uncomfortable to find oneself considered a privileged oppressor who is complicit in the patriarchal social structures that result in the subordination of half of humanity. I do not believe that feeling guilt would achieve anything, any more than simply denying responsibility for it would. Trying to change the world is likely to end in frustration and failure. Lingard and Douglas prefer the term ' pro-feminist' which describes someone who

> "sees the need to change men and masculinities, as well as masculinist social structures, while recognising the hidden injuries of gender for many men and boys" (Lingard and Douglas 1999: 4).

It is not just women and girls who are victims of hegemonic masculinity, we all are. As an individual teacher I can hope to influence the pupils in my class, as a headteacher I can hope to influence the teachers of other classes and perhaps through this research project I can increase the awareness of other teachers and headteachers so that they too can help the pupils in their classes to

free themselves from the repression of stereotypes and construct their own gender identities as fluid and multi-faceted as they would really like them to be.

I am conscious of Kahane's warning about those men who are perceived to be feminists but fall short of the requirements because of their shallow engagement with feminism. These are men who talk about feminism a great deal, occasionally get involved in feminist projects in a rather conspicuous way but do not actually achieve anything (Kahane 1998). Kahane fears that he himself falls into this category sometimes and worries that although men can become part of the solution they do not cease to be part of the problem. Christine Skelton, too, has suggested that some men researchers appear to pay lip-service to feminist concerns but actually side-step them (Skelton 1998). She accuses them of being selective in which feminist voices they hear and represent, choosing those that suit but failing to recognise others or even treating them with hostility. Consequently, when (for example) programmes are being developed for raising boys' achievements, the recommended strategies that emerge concentrate on equal opportunities approaches rather than tackling the ideas of hegemonic masculinity and recognising how damaging they can be. Thus, she concludes, the focus is again on the boys, and the girls could be relegated to the sidelines. This may be the case in some situations but it is a negative (if possibly realistic) way of looking at it. In this study I hope that I can prove my feminist or pro-feminist credentials and be fair to all those who participated. I take comfort that Kenway (paraphrased in Skelton 1998) was more positive about men engaging in feminism and suggested that, although there was still much to be done, feminists should work with pro-feminist males for their mutual benefit. This seems a practical way forward and could lead to greater understanding on the part of all those involved.

I am also encouraged by Sandra Harding who has pointed out that there have been many male feminist activists and there have been many men in the past, who may not have described themselves as feminists, but who have played a significant part in improving the condition of women's lives and contributed to feminist thinking (Harding 1998). She explains that just as there are women who can offer illuminating insights about rape and battery without having experienced them personally, and that we can all learn from the experiences of friends and loved ones and through other vicarious experiences from television, newspapers and journals, so men can watch and listen and critically rethink the institutions of society. At the very least men can

> "refuse to respect the masculinity ideals that structure the cultures, policies and practices of so many social institutions." (Harding 1998: 181)

However this is a lot easier to say than to achieve because it is not just that masculinity has been valorised in our culture but that its features are firmly embedded deep in that culture. It also suggests that women will need men's support – if only because women alone cannot overthrow it (Bartky 1998).

Although I have not been involved in any significant feminist projects, I hope that in my small way, I can be part of the solution as I do not really share Kahane's pessimistic view that

> "only in a profoundly transformed world will male feminism be something other than an oxymoron" (Kahane 1998:232).

My Theoretical Framework

I am committed to social justice and I see feminism as being an important strand of this. I am also committed to education and recognise that educational practices and outcomes are damaged by sexism (Griffiths 1995). In carrying out this study I have been

strongly influenced by the work of Barrie Thorne (1993), Rob Connell (1995), Becky Francis (1998) and Christine Skelton (2001). I have utilised aspects of their theoretical work in the construction of my own theoretical framework, but my framework is not completely congruent with any one of them.

Like Becky Francis my position is that gender difference is socially constructed through interaction with others (Francis 2000). Who those others are will affect how we are positioned and how we position ourselves through discourses. Discourse is a key concept drawn from the French philosopher Foucault.

> "Discourses are historically and socially specific ways of defining and producing knowledge and truth, which function as sets of rules about what can and cannot be said, and what is and is not the case."
> (Open University 1995: 30).

Surrounding any one person, object, event etc there could be a variety of discourses each telling a different story about the person, object or event in question; each of them a different way of representing her, him or it to the world (Burr 1995). Consequently our identity is constructed from the discourses culturally available to us and to those with whom we interact. A person's identity is achieved by subtly weaving together many different 'threads' such as age, occupation, ethnicity, class, gender, sexual orientation etc. (Burr 1995). For example the housewife could be positioned as the victim of patriarchal oppression or as the perfect symbol of a woman fulfilling her natural role (Francis 2000), or in a school that emphasised a particular feminine behaviour in its conception of girls, loud, noisy girls may be positioned as naughty and difficult, or tomboys (Jones 1993). Naomi, a girl in this study, is positioned by some of the other girls as a tomboy, a deviant girl, whereas she positions herself as a girl who enjoys participating in a wide-range of activities. This positioning can be very limiting for both males and females, particularly for people who are positioned by those close to

them where they would prefer not to be and for those lacking the confidence to make their own preferred position dominant. There are important consequences in terms of power involved here because some positions (generally masculine) are more powerful than others (generally feminine). It has been shown that women teachers have felt it necessary to ignore or seek to justify violent behaviour by boys because they find that sexism is still embedded at an ideological level and, as adult women familiar with sexual harassment, they know how best to protect themselves (Skelton 1997). To me it is totally unacceptable that anyone should have to tolerate such behaviour. Like Connell (1993), I recognise that under our current social and political arrangements women are, as a group, massively disadvantaged; and I believe that men ought to be involved in changing it – not in a patronising way, not through some notion of self-sacrifice, but as a positive commitment to social justice.

'Gay' is frequently used as an insult or form of abuse between young heterosexual males. There are assumptions in society that people are heterosexual unless they say otherwise. Girls are sometimes teased by older relatives about whether or not they have a boyfriend and in the same way boys are asked about their girlfriends. I do not suppose many boys are asked if they have a boyfriend, or girls a girlfriend by aunts, uncles or grandparents. Consequently pupils in school (and probably at home) find that they are expected to conform to a regime of compulsory heterosexuality (Epstein 1998; Paechter 1998) and they look to adults and to their own peer group to clarify the situation on how to develop their own gender identities. It is possible that they could feel insecure about their personal identity and what behaviour is appropriate for their own group (Jordan 1995). Because of the power of the discourse of gender dichotomy and with no other position being apparent, one way that they could gain some confidence in their own position is to construct their identities as being different from, or oppositional to, children of the other sex (Francis 1998).

My own notion of equality is that all people should be genuinely free and have the flexibility to be themselves without being stigmatised. Sadly I do not honestly see that situation being a reality for many people as so many of us are concerned about what others think about us. Becky Francis asks

> "Can women be 'masculine' and men be 'feminine'?"
> (Francis 2000: 17).

If these terms are social constructions then presumably it is possible, but they are so closely associated a particular sex there is a stigma about them in our society when applied to the opposite sex. 'Girl' or 'girly' is another common insult among boys and it is likely that most males would regard 'feminine' as an insult rather than a compliment. Francis suggests that we might need to develop a new terminology, but even if this were possible, it would seem likely that the right-wing media would condemn this as 'politically correct'. This does not make it undesirable or unattainable. It does mean that it would probably take a long time to achieve.

Although both Francis and Skelton use Connell's work and the idea of hegemonic masculinity to inform their own studies there are tensions between their different theories that need to be accommodated, or at least kept in mind. All three share the idea that gender is constructed but Becky Francis draws on notions of discourse post-structuralism and, although Connell recognises that this semiotic approach has been effective in cultural analysis, he finds it limited in its scope. Connell (1995) maintains that there is more to social analysis than just discourse. For him one of the key issues is the relationship between structures of power and agency and he does not believe that post-structuralism is effective enough in identifying power and how power operates. But then, one of the most difficult concepts for people to grasp is where power comes from (May 1996) and consequently how to oppose it. Foucault, however, does not see power as a repressive force (Burr 1995). He maintains

it is at its most effective when it produces knowledge. For Foucault power is not a possession - something that some people have and others do not - it is an effect of discourse. Power is everywhere and consequently some power is available to everyone in the process of changing selves and lives (Burr 1995). To exercise power is to define the world or a person in ways that allow an individual to do the things he or she wants. Davies shows how girls were able to draw on alternative discourses in forming their own identities in response to boys' attempts to restrict their options (Davies 1993). Francis is aware that it is not easy and finds that she herself has

> "become gradually disillusioned with post-structuralist positions" (Francis 2000: 20)

because she believes that they cannot help her to bring about the changes (for the better) that she, as a feminist, would like to see happen.

Children are not explicitly taught to be masculine or feminine.

> "It is implicit in acts of learning to talk, learning to read, learning to be a 'good child' or a competent person." (Davies 1993: 198)

Because this process is so embedded in the approved discourses of the dominant culture it is largely invisible, but Bronwyn Davies maintained that post-structuralist theory made it possible to make it visible. Her work involved an interesting study with pupils in a primary school to show that even young children can learn to be little post-structuralists. They could learn about how people are positioned within discourses of gender and also learn about how this could be changed. Davies claimed that the skills could be taught through classroom exercises and showed how both girls and boys could move into and out of a masculine identity or subject position (Davies 1993). Alison Jones had a brief public argument with Davies in 1997 that hinges on the relationship between structuralism and post-structuralism. Jones complained that her undergraduate students were confused in their use of post-structuralist theory and

concepts in their discussions of gender, and she attributed this to the students being introduced to post-structuralist language whilst they lacked knowledge of its underlying philosophical premises. Jones placed some of the blame for this situation on some aspects of Bronwyn Davies' writing and she accused her of unwittingly encouraging students to use post-structuralist language to write humanist discourse by using active verbs such as

> "they [girls] are active in taking up these different subjectivities; they can position themselves in a range of ways ..." (Jones 1997: 265).

Davies mused about the many different readings of the precise differences between structuralism and post-structuralism and though she recognised that Jones' reading of them was as legitimate as any other it was not the same as her own. She rejected Jones' accusation pointing out that she does not want her students to submit to an authoritarian interpretation of post-structuralism but to recognise why it is difficult to eradicate the text of themselves as humanist subject from their writing. For her the power of post-structuralist theory is in the contradictory discursive practices that result from it (Davies 1997).

Skelton, too, recognises the usefulness of post-structuralist approaches, but also finds limitations. For her study into boys and their constructions of masculinity in a city in the north-east of England, she opted for a materialist feminist position

> "which retained the usefulness of post-structuralist demonstrations of power *and* the notion of 'maleness' as a set of collective practices which marginalized and subordinated 'other' forms of masculinity and women" (Skelton 2001: 71).

Francis also uses the idea that schools provide cultural resources that the children can use for constructing their gender identities. Diane Reay, in her work about primary school girls (Reay 2001a), is another who has had to come to terms with the possible

incompatibility of structuralist and post-structuralist approaches. She recognises that they are often seen as opposing perspectives but

> "I use and combine what I perceive to be the strengths of both positions to illuminate the ways in which girls both construct themselves, and are constructed, as feminine" (Reay 2001a:155).

This is certainly a pragmatic and positive approach to the problem, but it may not be a resolution of it.

Connell, Francis and Skelton have all struggled with the notion of discourse and post-structuralism. They have concluded that post-structuralism is useful for cultural analysis but they complain that it does not offer an emancipatory agency, the power to change things. However, I think that this interpretation of post-structuralism that sees discourse as idealistic rather than material, could be too narrow. Kenway et al (1994) claim that discourses do have a material force and do shape identity and affect individual thought and action. They turned to post-structuralism because they felt that modernist feminist work for change had not achieved enough. As a result of their work, although they are not saying that post-structuralism provides the definitive answer, they maintain that feminist post-structuralism encourages feminists towards remaking meaning and helping others to remake meaning and themselves through participating in gender politics that will bring about positive change.

Chapter 3 – Methodology

Feminist Methodology

> "Methodology in social research is concerned with procedures for making knowledge valid and authoritative." (Ramazanoglu with Holland 2002:8)

Methodology is fundamental to any research project and there has been quite a debate about appropriate methodology for feminist research projects. Margrit Eichler asks the simple question,

> "Is there a feminist methodology?"

and initially answers it herself with,

> "It depends" (Eichler 1997:9).

She notes that there has been some disagreement among feminist researchers about whether or not feminist methodology exists, pointing out that some feminist researchers have denied its existence, others have accused those promoting feminist methodology of high-jacking feminism, whilst there are others still who are able to describe its basic principles

> "as generally accepted by all academic feminists" (Eichler 1997:24).

By this she means that there is no method that is used solely by feminists nor is there any method that cannot be used by feminists; although there are some practices that have become associated with feminist research. This is a common view of the current situation (Ramazanoglu with Holland 2002). However, Friedman is concerned because feminist scholars from different disciplinary backgrounds

> "May well share a certain core of feminist theory that shapes some of their research questions, but they hardly share a common methodological language and can barely understand each other's research" (Friedman 1998:315).

The situation would appear to be unsettled and there is not time or space here to enter this debate only to report that it is on-going. A man has to be particularly cautious entering this arena, because as Harding notes,

> "Men love appropriating, directing, judging and managing everything they can get their hands on – especially the white, Western, heterosexual, and economically over-privileged men with whom most feminist scholars and researchers most often find themselves interacting"
> (Harding 1993 quoted in Kahane 1998:226).

There has been a long tradition of the term 'man' being used to refer to both the human species and the male of that species. This has led to the male being positioned as the Subject, or norm, and the female being positioned as the Other (Paechter 1998). Similarly, Richard Dyer observed that while black people are considered to have 'racial' identities, whites are generally viewed as raceless – thus normal and neutral – and so the unspoken centre of most discourse (Dyer 1997). Dyer wants to draw attention to this and encourage people, particularly white people like himself, to question the way that the white image is taken for granted in so much of our popular culture and so disrupt it. As a white, Western, heterosexual man whom some might consider 'economically over-privileged', I want to make it clear that I do not want to appropriate anything, but I would like to be included and make a contribution that could be valued by some feminist researchers. It is not for me to tell other researchers what methodology they should use. I shall just try to describe my own thinking.

What is Feminist about the Methods I Use?

Thompson, too, observes that feminists do not agree on whether some research methods are more feminist than others (Thompson 1992). There has been a debate about the quantitative/qualitative divide that has been said to characterise men's and women's

respective sociological approaches (Eichner 1997). Eichner goes on to suggest that qualitative methods are well suited for studying new subjects such as gender issues, because they are

> "*relatively* free of assumptions about what is typical of a given situation" (Eichner 1997:11),

and others have pointed to the potential to develop more human and less mechanical relationships between researcher and researched (Jayaratne and Stewart 1991). Kelly et al (1992) defend their use of quantitative methods for their research project concluding that it is epistemology that defines what counts as valid knowledge and why. Clearly individual researchers will choose the approach that they feel is more appropriate for their own study. I chose to carry out a qualitative study because I thought it would allow a more personal approach to learning about people's attitudes to the curriculum area on which I was focusing. However, I discovered that by working in this way one can learn much more than this.

Ethnography has become popular as an approach to social research in recent decades (Hammersley and Atkinson 1995). It is an approach that enables the researcher to speculate on how people in a particular group organise themselves to manage their lives, communicate with others and deal with the forces that they can and cannot control as they weave together the strands of description that they have collected (Wolcott 1995). Thus I have been able to study the ways children have used their tasks and activities in school and the people around them in the construction of their own identities. An ethnographic study is concerned with looking at and trying to make sense of

> "human social behaviour in terms of cultural patterning" (Wolcott 1995:83).

My particular focus has been to construct a narrative, a story, about how, in particular, gender identity – gender culture – is constructed in the school.

> "Any given practice that is studied is significant

> because it is an instance of a cultural practice that happened at a particular time and place"
> (Denzin 1997: 8).

However, I cannot pretend that I am going to discover a universal truth, or that I am observing life and work at St Mark's Primary School from a neutral objective position. This study is not a representation of reality, but my own construction (Stanley and Wise 1993).

> "[E]very qualitative researcher needs some structure or conceptual framework through which to view, record, and interpret social action."
> (Wolcott 1995: 89)

I have outlined my theoretical framework in the previous chapter and it is through this that I have viewed the classroom and the conversations of the children and tried to make sense of what I saw and heard.

My main methods of data production were through interviews and classroom observation. When I first began this project I was quite naïve about how I might go about finding the information I thought I needed. In my research proposal I stated that my main sources of data would be unstructured interviews with teachers and pupils. In practice I changed that to semi-structured interviews so that I could focus the interviewees on the topics that I wanted them to talk about because of the constraints of time and the narrow focus of my study. Otherwise, possibly, I would have had hours of interesting conversation with the children, but very little of it to do with design and technology. Given the constraints on my time this was not a very practical approach. The semi-structured format still allowed the interviewees plenty of opportunity to talk freely and raise issues that were important to them. However, at that stage, I had not thought very clearly about how I would analyse those interviews because I had not clarified my own theoretical perspective. Over the years spent on this study – the reading, the struggles to express myself

when writing the various progress reports and the tutorials with my patient and supportive supervisor – I have found myself climbing so steep a learning curve that it sometimes seemed that if I let go for a second I would slide back to the bottom. But, fortunately I find that, along with the struggling, I have been learning and this has enabled me to revise and develop my thinking right up to the present.

Having been brought up on the 'scientific' approach to research with its demands for objectivity and the passive voice etc I found it harder than I thought to clear my mind of that thinking and start again. Like some other students I have found it difficult to use the word "I" in this dissertation

> "having been taught that this is an inferior style, or conveys subjectivity."
> (Ramazanoglu with Holland 2002: 162)

In my original research proposal I explained that my aim was to discover the attitudes of teachers and pupils to design and technology and that I would use Grounded Theory procedures (Strauss and Corbin 1990) for the analysis of the data. This was mainly because my tutor for E835 'Educational Research in Action (which I studied as a kind of gateway to beginning the Doctorate) encouraged me to do so – although I have to say that I did not know much about it. However, when I started reading the literature on research in schools I soon came across the work of Becky Francis (1998) and through this I began to think in terms of discourse analysis. It seemed to offer hope although, at that point, I did not really know what it was or what it involved. Learning more about postmodernism or poststructuralism was difficult because of the many arguments for and against it as an appropriate approach to research and the sometimes impenetrable language, as I have discussed in Chapter 2. It was a long time before I became familiar and comfortable with these ideas. In the mean time I had begun work on my initial study.

I used to think that through the interviews I could access a kind of reality. By this I mean that I thought that I could analyse what the children and their teachers told me and find the true meaning behind what they said. It was hard to let go of this idea, but as Scheurich says,

> "In an interview there is no stable 'reality' or 'meaning' that can be represented" (Scheurich 1997:73).

He warns that the researcher inevitably brings a lot of 'personal baggage' to the interview and there is a danger that the final interpretation of the interview will be merely reflecting the researcher and his or her baggage. By highlighting the 'baggage' that I have brought to this process in outlining my theoretical perspective, I hope that the readers of my dissertation have

> "some sense of what the researcher brings to the research enterprise" (Scheurich 1997:74)

and thus will be able to judge the case that I make. It is also the case that any representation is selective (Wexler 1992) and so it is important that I foreground the process of selection.

I started my analysis for the initial study by listening again to what the interviewees told me and identifying themes. As I had anticipated, I was trying to find out what lay behind what they were saying to me. Because of the ways of understanding what it meant to be a person that were available to me at that time I assumed that people would either tell the truth or not – possibly through misunderstanding or partial memory of thoughts, feelings and events. The veracity of what I was told could be checked by asking again (on another occasion, in a slightly different way etc), by asking someone else, by observing the interviewee in the classroom, by looking at work they had done and so on. However, like Davies (1993) I was uncomfortable with an approach that implied that my interviewees were out to deceive me. Had I continued with that approach I would probably have ended up with a different focus for this study.

I tried instead to understand how the children constructed their own discourses. A number of recent feminist studies have used postmodern discourse analysis as part of their analytical process (for example, Davies 1993; Francis 1998; Reay 2001a), although, as I discussed in the section on my Theoretical Perspective in Chapter 2, this is the subject of debate in feminist circles. As I became more familiar with the work of Francis (1998) and Davies (1993), I attempted to understand how the pupils constructed their notions of masculinity and femininity through the words that they used in our discussions and with each other in the classroom, and through the ways that they performed in the classroom. By this I mean their engagement with the curriculum, their engagement with the tools and other artefacts that they used, their relations with each other and their relations with me and the teacher.

People make sense of their world through narratives, and teachers and pupils are no different in this respect (Davies 1993). We don't just read and write stories we live stories, too. Narrative is all around and through our culture. It is through narrative that people are able to organise their experiences and make sense of what has happened to them.

> "Narrative is both a mode of reasoning *and* a mode of representation. People can "apprehend" the world narratively and people can "tell" about the world narratively." (Richardson 1995:200)

Through my reflection on the interviews and the classroom observations I sought to understand the boys' constructions of what it is to be male and the girls' constructions of what it is to be female because it is how people construct these narratives in particular ways that makes gender real. Had I started off with a clear theoretical perspective and a clear understanding of and commitment to a poststructuralist approach to this study, I would have had these thoughts in the forefront of my mind as I planned the study and

conducted the interviews and classroom observations and I am sure that I would have done some things differently.

What is Feminist about the Ethical Considerations?

> "Even the most committed feminist researcher is in the game of research out of self interest."
> (Ramazanoglu with Holland 2002:157)

Although this may well be the case, ethnographers have a responsibility to act in ways that are ethically responsible (Hammersley and Atkinson 1995). Feminist researchers are not the only ones to be concerned about ethical issues, but they do tend to show a greater concern for these than usual (Eichler 1997). One should be clear about one's ethical position in relation to those that participate in the research, what they are asked to consent to and what information should be provided before such consent is sought (Ramazanoglu with Holland 2002). When I began this research project I wanted to be open and honest with the headteacher, teachers and pupils at St Mark's about what I was trying to achieve, in order that they could give informed consent before participating. However I did not want to tell them too much in case this had an impact on the data production, for example, by influencing what the participants would tell me, or by the way they would act in the classroom. I did not want them to tell me what they thought I wanted to know, so in the end I only told them a small amount but made it clear that they did not have to participate if they did not want to.

Of course, even if one were to provide the participants with plenty of information about the research project that is no guarantee that those consenting really understand to what it is they are giving their consent. The researcher's interests, values and concerns may or may not coincide with those of the participants. I was lucky that the focus of my study is not high profile, sensitive or particularly

controversial (as far as I am aware). I did not anticipate that anyone would be distressed in any way as a result of participating. Nevertheless, I tried to remain alert to the interests of those who took part in case the process produced knowledge that could harm them (Ramazanoglu with Holland 2002). All participants were guaranteed confidentiality (as far as is possible in taped group interviews) and all names (apart from my own) have been changed.

Informed consent is an important principle, but feminists believe that ethical considerations should go beyond that so that social justice characterises the research process (Thompson 1992). Justice involves freedom and equality, so participants should not be exploited or objectified in research. Individuals have the freedom to define themselves and their situations in their own terms unconstrained by the demands, standards or agendas of others. It also means that everyone has equal worth and is able to participate fully with differences respected (Thompson 1992). These are fine principles and I would like to think that my work adheres to these principles, but, with the best will in the world, there are problems when adults (particularly teachers and headteachers) engage in research projects involving young children. I will explore these issues further in the section on research relations.

What is Feminist About the Way I Attempt to Study Gender Issues?

> "Very simply to do feminist research is to put the social construction of gender at the centre of one's enquiry." (Lather 1988:294)

Before feminist research began to make its mark, not much was known about women because men were taken to signify the universal norm (Eichler 1997), and so research on gender was associated with feminists. However, one does not need to be a feminist to study gender issues. Indeed there are those who study

gender issues from a 'men's rights' perspective who may well describe themselves as anti-feminists (Lingard and Douglas 1999). Lingard and Douglas trace how the men's movement has changed from the 1970s (when men began to realise that they had a gender) and men's groups believed that men could benefit from women's liberation through a greater freedom from rigid sex-roles, to more recent times when some see our society as being anti-male and regard themselves as a 'backlash' to feminism.

So if one does not need to be a feminist to study gender issues, does one need to be a woman to be a feminist? I have discussed this in the section 'Men Engaging Feminism' in Chapter 2 and concluded that it is possible for those who are not women to be feminists, and as Ramazanoglu and Holland have pointed out,

> "If a feminist methodology has distinctive rules, a politically sympathetic man should (in theory) be able to use them."
> (Ramazanoglu with Holland 2002:8)

There could be problems, of course, if a researcher's political position is disputed, so I need to be clear in my own mind about my own right to describe myself as a feminist or pro-feminist, and be able to justify that. It is not that simple, though. Ramazanoglu and Holland (2002: 7 – reproduced in Appendix D) have compiled a list of what they consider to be the key characteristics of feminism and there is much scope for controversy. Firstly, they warn that any definition of feminism can be contested for there is no central authority that has the right to rule on whether one is or is not a feminist. Secondly, they point out that although feminism is diverse it must have some boundaries so that 'non-feminism' is excluded, but it is not clear who, if anyone, has the right to define such boundaries. This is encouraging for it suggests that I have as much right as anyone else to call myself a feminist – although equally anyone else has the right to claim that I do not match her or his definition of a

feminist. Thirdly, feminism implies that there is a unified community of women with a shared gendered position and that fourthly there are some common political interests between women. These are problematic because the concept 'woman' does not take into account the differences between women of different 'races', classes, ethnicities, ages, sexualities etc that could be of greater significance to them (Eichler 1997). Some women have less in common with other women than they do with others in their cultural group. Consequently there are women from a range of cultural positions who cannot recognise themselves as 'women' in relation to feminist theory (Butler 1990). This debate between feminists is pertinent to my study because it raises questions about how we study gender. If the concept of 'woman' or 'man' or 'boy' or 'girl' is not stable, as some postmodernists suggest, then it questions whether it is possible to study gender at all. If women and girls are not disadvantaged and there are no gendered inequalities or injustices then there is no need for feminism (Ramazanoglu with Holland 2002). However, we have also to bear in mind that although there may be greater injustices for some groups that require more prompt attention, gender inequalities, where they exist, must also be addressed. Thus, finally, feminism is about emancipation and is justified wherever gender relations are oppressive or unjust.

This study is not about women and any shared gender position they might have, nor is it really about emancipation. There is an emancipatory purpose to this work but my position is more about freeing all people from the constraints of gender-based roles and opening up the possibilities for everyone (whilst recognising the enormous difficulties involved in this). Gender is the key issue because (by chance, not by design) the children in this study are all from the same class, ethnic background and age group. My findings suggest that feminism does still have a purpose.

In this study I look at how children have ways of trying to control others in the group to conform as they construct and maintain their gender identities. I have found that they have techniques for patrolling the boundaries between the genders. Understanding power relations is central to feminist research (Ramazanoglu with Holland 2002). The post-structuralist theory of power positioning offers explanations for some of the challenges for feminism such as the ways in which some women use their power over other women (Francis 1998), or children over other children.

What is feminist about the kinds of research relations I set up?

Undertaking a research project with young children is problematic because of the inequality of the power relationships. Any adult is likely to be in a more powerful position than are the children participating in the research. Barrie Thorne commented on how being an adult in a situation where there are clear age divisions that are also associated with power and authority poses obstacles for those hoping to learn from children (Thorne 1993). Feminist conceptions of gendered power have been a key component in developing feminist theories and practices (Ramazanoglu with Holland 2002) and so this is an important issue. Thompson (1992) has suggested that the relationship between the researcher and those being researched should be based on equality and that participants should have a voice in the design and direction of the research project. I do not know what the teachers told the children about me when I was not there, but they always referred to me as Mr Hamlin, not John, in front of the children. This was the convention in the school for referring to adults when talking with children. (The teachers did use my first name when the children were not around.) I did not tell the children much about myself, other than I was interested in design and technology and wanted to know what they thought about it. They did not ask me anything about myself, but this could be because they are so used to visitors in the classroom (inspectors, advisors, governors, other teachers etc.) watching and

recording what is happening as part of the continuous monitoring process. This familiarity with outsiders observing could mean that teachers and pupils are less aware of a researcher in the classroom; although if a teacher has had uncomfortable experiences with visitors it could make her or him more cautious than she or he might otherwise be. I did not tell the children that I was a teacher or headteacher, but a man of my age, wearing smart clothes including a jacket and tie, was likely to appear to them as a figure of authority. This did not seem to unnerve them in any way. The tapes of the group interviews show that they chatted away happily, although some of the children were quieter in the individual interviews. Thorne found that she had to be careful how she explained her purpose to the children for if she was not careful with the vocabulary that she used there were misunderstandings and if she elaborated too much she

> "ended up feeling irrelevant and long winded"
> (Thorne 1993:18).

Inevitably there was some speculation among the children about who I might be. For example, the first time I met Naomi, Connie, Joanne and Chloe our conversation started like this:

> N: Craig said that you're head of maths at Willowbank [the local comprehensive school].
> JH: No, I'm nothing to do with Willowbank. He lied to you.
> N: They always do, really, they're boys, aren't they?
> JH: My name's John Hamlin and I'm quite interested in design and technology and that's what I've been talking to the boys about.

> "Reflexivity, in the sense of making explicit the play of power relations in your research process, and in identifying your relationship to the researched, is particularly important given the interrelation of

> politics, ethics and epistemology in feminist research."
> (Ramazanoglu with Holland 2002: 158)

Mrs Parsons, the headteacher, and all the teachers who participated in this project knew that I was a teacher and headteacher, but as I have said I never talked about myself as a teacher to the children. I wanted the children to talk about themselves and their work in design and technology in the interviews and get on with their tasks when we were in the classroom. Barrie Thorne was keen to approach her research with children with a respectful attitude. If adults, particularly teachers, are to learn from children they have to set aside any assumptions that they already know what children are like (Thorne 1993). At first I found it difficult just to sit back and observe without thinking about intervening when children were being naughty (although I never did intervene), but once I got used to it I found it very liberating that events in the classroom were not my responsibility. Even so, this does not sound like an equal relationship, but I will show in the next chapter how I tried to make the relationship more equal by ensuring that the children felt their views were valued and respected. I did not feel able to involve them in the design or the direction of the research project, though, because that would have either involved me telling them more than I wanted to tell them about it, or risk the direction and focus being changed.

Sometimes it is claimed that research involves the exploitation of those who are researched for they get little or nothing in return for their participation (Hammersley and Atkinson 1995). Indeed any research involving human participants is an intrusive process and it would be wrong to assume that participants are unchanged by the process (Lindsay 2000). However, I believe that all those who participated in my study were treated sensitively and with respect. The pupils appeared to enjoy the process – particularly when the interviews coincided with an unpopular subject on the timetable –

and the teachers were free to withdraw at any time. Rebecca Harris, one of the teachers, once remarked to a colleague loudly enough so that I could hear – tongue in cheek, I think – that it must be a good job to be able to sit and watch others working! However, she also told me that she enjoyed having people watch her teach because she was proud of her work.

Chapter 4 - Research Methods

To find out how pupils use their own ideas about gender in their work in design and technology and how they use design and technology in the construction of their own gender identities, I needed to capture the experience of design and technology as it is lived by the pupils themselves. As outlined in the previous chapter my main data production methods were interviewing and classroom observation. Because of the difficulties in visiting another school during school time it might have been a practical solution to devise a questionnaire to collect some of the data and ask the class teacher to distribute copies of it to the pupils for me, as many inexperienced researchers setting out for the first time do (Ball 1990), but I did not feel that a questionnaire would be sufficiently flexible and there might have been difficulties in the children understanding, or even reading, the questions. I was researching the children's attitudes and questionnaires are inadequate for studying people's attitudes (Tomlinson 1989); nor is it really possible to get through written text to the person behind it (Scheurich 1997; Stronach and MacLure 1997). I believed that if I wanted to explore more deeply how my informants construe particular topics it would be better done through interviews (Tomlinson 1989).

Interviewing

Although questionnaires are an efficient way of collecting data from a lot of individuals one has no idea how honestly or carefully they have been completed and it is difficult to probe further by narrowing in on specific detail by asking supplementary questions. I had built into my plan opportunities to clear up difficulties through follow up interviews. Even so, of course, I could only get a glimpse of the children's accumulated experience of design and technology through these interviews.

Interviews are social experiences and they can be learning experiences for all those involved (Holland and Ramazanoglu 1993). The interviewer can learn to be more adept at interviewing and become more sensitive to those that are being interviewed. They can also learn about themselves, as well as about the lives of those they are interviewing. Interviewees, too, can learn more about themselves, but they could also learn how to subvert the interview process and seize some control over it. How the interview is conducted will shape the production of the data and its interpretation. One needs to be aware that the language used can be ambiguous and vary in different situations, with different people and at different times and what a question or answer means to the researcher may mean something different to the interviewee (Scheurich 1997). The interviewer needs to create an atmosphere where trust and rapport can be created so that the interviewee can feel secure, but also needs to treat what is said critically. Just as Carrington and Short (1992) were concerned to ensure that nothing they said to the children in their study could be interpreted as reinforcing 'racist' imagery, so I was concerned not to reinforce sex stereotypes.

All the interviews for my study were semi-structured in that I had in mind a list of the issues I wanted to discuss. Originally I had imagined that the interviews would be unstructured and more like a flowing conversation. I realised, though, that given a choice the interviewees would be more likely to want to talk about issues that were higher on their own list of priorities. Constraints of time dictated that this was not a practical way forward. Having already rejected the possibility of using questionnaires, I felt that structured interviews were similarly lacking in flexibility. With the semi-structured interviews I felt I had a pragmatic compromise position that allowed me to pursue my own priorities but leave windows for new ideas prompted by what the interviewees told me.

Interviews have been used extensively in educational research as a key technique and an important source of data. I decided to begin with small group interviews with three or four children in each group and then follow them up with individual interviews. (See Appendix E for some examples of the questions that I asked.)

Group Interviews

I used group interviews for my initial study and as it was so successful I kept the format for the main study. Group interviews have several potential advantages over individual interviews. Through a group interview one can reveal consensus views and generate richer responses from the interviewees because the participants can challenge one another's views (Lewis 1992) although I noted that Carrington and Short had found that misconceptions or prejudices held by one child were often ignored, or even elaborated on, by the others (Carrington and Short 1992). If the participants are comfortable with each other and have trust in the interviewer(s) they are able to speak freely and respond to the comments of others. The interviews can be used to verify data collected by other methods (e.g. other interviews, scrutinising policies and schemes of work, classroom observations) and thus may enhance the reliability of the children's responses. A group interview that involves the whole class could be the most effective way that a teacher on his or her own can collect data (Solomon 1985). As time was scarce I could have raised the topic with the whole class and given all the children the opportunity to contribute. However, I chose to use smaller groups (of three or four children) because I wanted to enable the individual children to participate and make it less likely that the group would fragment into sub-groups and multiple conversations. I felt that these groups would be large enough for discussion but small enough to enable all to participate actively.

I wanted the children to feel relaxed and unthreatened by the interviews so I asked the teacher if I could interview them in friendship groups, for children give fuller responses when seated next to someone they like rather than an unknown or disliked person (Lewis 1992). However, I was anxious to avoid the experience of Watts and Ebbutt (1987) who were disappointed to find that their interviewees built on each others negative feelings about the topic under discussion and produced

> "a catalogue of disinterest, dissatisfaction and despair [...] an infectious downward spiral of shaded awfulness" (Watts and Ebbutt 1987: 31).

Maybe part of their problem was that the researchers were attempting to 'reveal the truth in people's heads' rather than discover how they constructed their own reality. Had a similar situation arisen in my study I would have wondered why they had chosen to tell me these negative stories rather than other more positive narratives. Perhaps the researchers highlighted these negative narratives and ignored more positive narratives in what they were being told. I would have used the follow-up individual interviews to enable the interviewees to clarify their own feelings and enable me to judge the extent to which these were held by different individuals. This is not as simple as it sounds and may bring further complexities. Stronach and MacLure report that 'Jack', the headteacher they each 'portrayed' based on interviews that one of them conducted with him, was unhappy with the negative 'portraits' they had constructed of him and sought redress.

> "But his rescue attempts kept re-telling the negative as well as the positive themes. And new themes and concerns were still proliferating throughout the follow-up interview." (Stronach and MacLure 1997: 56)

I had also to accept that if it is possible for interviewees to build on one another's negative feelings then it must be possible for them to be carried along by another's enthusiasm, so I tried to keep this in the back of my mind.

The researcher collecting data through interviews needs the interviewee, but the interviewee does not need the interviewer. Interviewees could, of course, have their own motives for participating that may or may not coincide with those of the researcher. Although it was not my experience I was aware that there is the potential in all interviews to generate responses that are for effect (e.g. to impress, or to shock) (Cullingford 1993). Therefore with group interviews because there is a larger audience there could be more opportunities to produce responses that are for public consumption (e.g. uttered to intimidate, or to curry favour with one or more of the group) rather than provide an accurate response for the researcher (Denscombe 1995). During the interviews I tried to respond positively to reassure the interviewees that they and their views were valued and to encourage all to participate by expressing themselves fully and openly. It is not possible to respect an interviewee's confidentiality in the group interview situation (Lewis 1992), but I knew that I could, if appropriate, probe such areas on another occasion in the individual interviews.

Individual Interviews

The individual interviews took place a little while after the group interviews so that I had had chance to think about the group responses and identify the areas that I felt needed further clarification or a more specific response. In the initial study I chose a boy and a girl that had had little chance to contribute to the group discussions because it seemed that their peers had been more confident about talking and they had not found it easy to contribute. I wanted to give them a chance to express their opinions uninterrupted. I am glad that I did because, although they were still quiet and subdued, they provided some very useful data.

There were no individual interviews with any of the children in the second set of groups (those interviewed early in 2001), but with the third year group (2001-2002) I was able to interview all the children individually twice as well as in the initial group interviews. Between these interviews there were also opportunities for classroom observation and so I was able to get to know the children better and they were able to get to know me. Those children who had tended to dominate the conversation in the group interviews chatted away in the individual interviews, whereas those who had been more hesitant in contributing to the group interviews were still quiet and tended to give short answers to my questions. The second set of individual interviews enabled me to talk to the children about their new design and technology project and to link their comments to what they had said before and to what I had observed in the classroom. So, for example, I was able to ask Naomi what she had meant when she had said in the group interview that she thought the boys were mad, to ask the other girls what they thought of that comment and even to ask some of the boys how they would respond to it. Another example was that I had an opportunity to talk to Jack and Alex about why their group split into two groups.

Classroom Observation

There are distinct advantages in combining classroom observation with interviews because the data from each can be used to support and illuminate the other (Hammersley and Atkinson 1995). In my original research proposal I did not include any classroom observations because I thought it would be too difficult to organise enough time from my own daily duties at the times when the class at the focus school would be doing design and technology. I am glad that I was persuaded to change my mind. Observing the teacher and the children in the classroom can put what has been learned from the interviews into context. It can provide important opportunities for triangulation, but much more importantly it gave me the opportunity

to watch pupils in the process of building and maintaining their gender identities.

There were plenty of warnings for me as a novice researcher embarking on a classroom observation (e.g. Hitchcock and Hughes 1989; Ball 1990; Simpson and Tuson 1995) to be aware of the diversity and complexity of classroom interactions; even for those familiar with life in a classroom. Then there are the problems associated with being familiar with classrooms; such as suspending one's own assumptions about classrooms and teaching, and being able to make the familiar strange (Hitchcock and Hughes 1989). Interaction between the pupils is incredibly complex and much of it is non-verbal and very subtle (Francis 2000). An observer can never fully understand everything that is going on and may well misunderstand what is happening or make wrong assumptions about actions that take place (Brown 1990).

In the lessons I observed there was very little class teaching actually taking place. The lessons were largely practical and the teacher would outline the tasks for that particular session and leave the children to get on with it, occasionally interrupting to show examples of how to do, or not do, something or to demonstrate a particular skill. During the lesson she would go round the room encouraging individuals, or groups, and ensuring that they were using the tools correctly. Sometimes she and the classroom assistant would spend much of the time supplying materials from the stock available or supervising children using potentially dangerous equipment like the glue gun. In these periods the children were left to get on with their tasks. At the end of the lesson she would draw the class together to review what had been achieved and to enable some of the children to show their work to the others.

In my observations I was attempting to learn about gender through the children's interactions with one another and the tools and materials they were using. I felt it was important to keep in mind that

> "children's interactions are not preparation for life;
> they are life itself" (Thorne 1993: 3).

What the children might be like at some point in the future when they are adults, I could not guess. I was not trying to identify any embryo men and women that might emerge from these children, but to see how they used the resources around them, inside and outside the classroom, and how they interacted with the people around them to construct and develop their own identities – particularly in relation to gender. Children are not passive vessels waiting to be programmed in a particular way by the adults around them (although there may be adults who wish that were the case) but social actors using the world around them in their performances of themselves.

If there are so many interactions taking place how does one know which to observe? It is impossible to see everything at once and certainly not possible to record everything that is happening. Just as an audio recording can be useful for recording interviews so that they can be transcribed and analysed later, so lessons can be recorded by a video camera. Some of the advantages of using a video camera are that there is a permanent record of what took place, the data can easily be shared with others and one can go back to re-check findings or possibly reinterpret the data (Plowman 1999). Becky Francis found it was

> "vital for recording the exchanged looks, gesticulations
> and other forms of non-verbal comment which played
> an integral part in the group's communication and power
> construction" (Francis 1998: 20).

I have access to a video camera but I chose not to use it because it would have introduced another artificial element into the proceedings. Researchers inevitably change the situation they are researching by their presence and the introduction of a camera

would add to the abnormality of the situation. Unlike Francis, I was not setting up a role-play situation and wanted to have the minimum possible effect on the class and change as little as possible. People often deliberately play to a camera when they know it is there. There have been many occasions on television when a news reporter with a camera has attracted a crowd and we have seen people behave in bizarre ways, and I have witnessed this change in my own pupils when using the camera in my own school. I expect the novelty would wear off after a while but I did not have time for this. Even if these difficulties could have been overcome, it would not have been possible to see all of the classroom at the same time. So, in the light of these thoughts, I decided that I would have to sit and watch what was going on and take notes in a small spiral notepad, then copy them up in the evening adding any other details that I could remember but had not had chance to note down. (See Appendix F for a list of the kind of observations I made).

Documents

I was lent copies of some of the school's documents to assist me in getting to know the school. I could have had the school's full range of policy documents and, although this would have been useful in some respects to have available on my shelf, I did not think the expense and time involved warranted copying everything. I limited myself to the Mission Statement, Aims, Equal Opportunities Policies (Appendix A and Appendix B) and the Design and Technology Policy (Appendix C) as these were the ones that I thought would be most useful to my study.

The documents have provided me with useful background information that helps to put other things into context, but these are not the dominant policies of the school. Schools are required to have all sorts of policies and the quality and effectiveness of those policies will be variable for many different reasons. Schools sometimes

devise their own policies from scratch and all members of the school community are involved in the process. Many schools, like St Mark's, use generic models of policies (often supplied by the local education authority) as a starting point and then in discussion with all or some members of the school community the model policy is customised to make it more relevant for the individual establishment and to give those to whom the policy will apply 'a sense of ownership'. Stephen Ball has identified the distinction between

> "policy as text and policy as discourse"
> (Ball 1994: 15)

whilst emphasising that policy is both of these things. The text of a policy is not necessarily clear. It can mean different things to the different people who worked together to create it and can also mean different things to different readers. It is also quite possible that those whose responsibility it is to implement the policy may not even have read it. Linda Osborne, the first teacher I worked with at St Mark's said,

> "It seems to be the ethos of the school that we promote equal opportunities for everyone".

She was not even sure if the school had an equal opportunities policy, although if she had read it she would have seen that it says,

> "It is important to state that we have developed this policy collectively as a whole staff with significant involvement of the pupils."

Indeed the policy statement continues,

> "It has been recognised that such a policy can only be practised in a community and environment where all members understand, and have some part in negotiating, the codes by which it will operate."
> (See Appendix A).

But, as Ball maintained, policy is also discourse (Ball 1994). Gender reform is not a hegemonic discourse in the English education system. Discursive fields may be composed of competing ways of

giving meaning to the world and its organisations (Kenway et al 1994). There are other more dominant discourses concerning standards, and the importance of literacy and numeracy that have pushed notions of equal opportunities out of the limelight. Consequently, the discursive context in which the teachers at the school operate – e.g. 'standards' and the reputation of a school as measured by school league tables, performance management, failing boys – may well impact on the discourses of equal opportunities and the way policy texts, like the one for equal opportunities, are re-translated by different agents. Issues like 'failing boys' could be causing some schools to rethink their approach to equal opportunities in a way that would not gain the approval of feminists.

Each individual will have his or her own priorities and these may not be the same as those identified by the Department for Education and Skills or the school management. It would seem that at St Mark's the teachers are aware of the policy, but not familiar with its text. For example, both Jane Bull and Rebecca Harris, two of the teachers I interviewed, knew it existed, for they had copies of it in their Staff Handbooks, but neither could remember when she had last read it. The pupils had never, as far as I am aware, seen or read the policy but like Linda Osborne, the teacher mentioned earlier, had absorbed its message from the underlying ethos of the school. Madden (2000) has observed that primary schools tend to see equal opportunities as integral to their practice rather than as a discrete priority. The headteacher says she can see the policy working when she walks around the school,

"The girls feel valued and I think the boys do, too."

How a policy impacts on the whole school community would make a fascinating study of its own but I have not had the opportunity to explore it more fully.

Ethical Issues

Ethnographers have a responsibility to act in ways that are ethically responsible (Hammersley and Atkinson 1995). All research is a kind of intrusion into a pre-existing arrangement of relationships (Oakley 2000) and when one is studying people's behaviour or asking them questions one has certain responsibilities to face. Research projects involving pupils tend to take place in school and often in school time. Researchers need to consider the extent to which the pupils (and their parents) in their studies should freely give their consent to being participants (Lindsay 2000). It is ethically important that pupils feel free not to participate in an interview if they do not want to, but it has been suggested that the concept of 'informed consent' and the quality of the information on which it may have been based has rarely been questioned (David et al 2001). The implication is that too often researchers have paid lip-service to children's rights. However, if you give children sufficient information for them to make an informed decision on whether to participate or not, you may give them too much information and unintentionally influence their answers thus 'contaminating' the research (Silverman 2000). Although it is most convenient to carry out the research in school this can sometimes pass on unintended messages. For example, Denscombe and Aubrook (1992) reported that some pupils presented with a questionnaire as part of a research project saw it as a piece of schoolwork which they were required to complete rather than as something extra that they were doing voluntarily.

Denscombe (1995) describes a project that deliberately created groups with members who held opposing views with the stated aim of confronting issues rather than confronting people. There are dangers with this approach, particularly when the respondents are pupils and the researcher is a teacher. Separating issues from people is easier said than done and some participants could be

distressed by the experience. Although Denscombe applauds this particular study for its openness and reflexivity it would not have been an appropriate approach for my study.

Before each interview the children were given the opportunity of not taking part and were told that if at some point during the interview they wanted to leave they were free to do so. No child did – other than two children who had to leave to attend a School Council meeting.

Interviewees are not passive subjects, they are active participants and may well try to impose their own agenda on the event (Scheurich 1997). Becky Francis found while doing the interviews for her study in secondary schools that to get some of the boys talking to her she had to adopt a

> "winsome, warm/jokey approach"
> (Francis 2000: 29)

and when talking with the girls she found herself colluding with their derogatory remarks about boys and men. This raised uncomfortable heterosexual gender issues for her. Fortunately I did not encounter problems like this, but I was working with younger children. I had wondered what I might do if any of my interviewees made sexist remarks and decided that I would try to probe what was actually behind the remark by asking supplementary questions. Normally I would challenge such remarks, but I did not want to damage the interviewer/ interviewee relationship. In fact the children did not make any really sexist comments, although some of them did make some generalisations about boys and girls, that when pressed, they later modified to certain boys and girls. Had they made any racist remarks I would have had no hesitation in challenging them. Like Carrington and Short I think researchers have a responsibility to make clear their disapproval of racist remarks and the reasons for that disapproval (Carrington and Short 1993).

To gain entry to the children's classroom I had asked for and received the consent of the headteacher and the class teacher. However, I did not ask for the pupils' consent – informed or otherwise – to observe their lesson, because that would not have been practical. However, I was careful not to abuse the privilege of being allowed into the classroom and sought to treat the pupils, their activities and what they told me with respect. All names in this study have been changed to ensure confidentiality for the participants.

Making Sense of the Data

Feminist researchers see gender as a central factor in the framing and shaping the actual conditions of people's lives. Gender is significant in the distribution of power and privilege, and it has had fundamental effects in the forming of our consciousness, skills and institutions. The key goal of feminist research in education and the other human sciences is to expose examples of women's and girls' unequal social position in order that these situations can be changed. Thus feminist research can be emancipatory because the oppressed can be empowered to understand and change their own oppressive situations (Lather 1988).

Pro-feminists, too, recognise that men, masculinities and masculinist social structures need to be changed (Lingard and Douglas 1999), for they are aware of the hurt suffered by many men and boys, as well as women and girls, as a result of the current gender order. They reject the notion that feminism has gone 'too far' so that girls outperform boys at school. The pro-feminism position supports the general feminist aim of reshaping patriarchal relations, while maintaining a male-positive stance which, whilst accepting feminist critiques of men and masculinity, goes beyond guilt and recrimination to work for change in the dominant male power of our culture. Much of the research, even from a feminist perspective, into gender issues in recent years has been about boys and masculinities (e.g. Connell

1995; Skelton 2001; Epstein 1997 etc) because they have been seen to dominate many classrooms. Aspects of hegemonic masculinity damage the boys themselves, as well as those other boys who are marginalised and subordinated, and many girls and women.

We live within a culture, or cultures, and use this culture in our everyday lives.

> "Culture is crucially about identity, but social and positional as well as individual and self-inventing" (Willis 2000: 4).

Cultural identity is about maintaining the self as a discrete and workable force not as a social representation, but we are constrained (and enabled) by the powerful cultural forces around us. In this project I have tried to carry out an ethnographic study of boys, girls and their teachers working in one small area of the curriculum of a primary school. I was setting out to identify and describe certain cultural processes – about how children use the resources at their disposal to construct and maintain their own gender identities. An ethnographic account is an attempt to construct a theory of culture (Wolcott 1995) and here I am attempting to construct a narrative about how gender identities and gender culture are constructed in a school.

As interviews can only give the merest glimpse into other people's lives interview-based research rests on the skill with which the researcher makes sense of the interview afterwards (Holland and Ramazanoglu 1993). Researchers will probably not be able to use all of the information that they collect and will have to select which bits to use. Inevitably, in this selection process and in interpreting the texts of the interviews, the researcher is

> "reading meaning into them" (Holland and Ramazanoglu 1993: 273)

whilst making sense of their meanings. There is no neutral technique of analysis available for interpreting the data and so the researcher

will be interpreting it from a particular standpoint (Hammersley and Atkinson 1995). Feminist or pro-feminist researchers must try to explain the grounds on which they have made their interpretations and make explicit the processes of decision-making that have produced those interpretations. They aim for reflexivity, which is a sort of continuous critical reflection on the processes of the research.

Holland and Ramazanoglu (1993) have identified three basic positions that feminists can take up when producing conclusions from interview data, although they stress that this is an over-simplification of the available positions. The first is that the data reflect an unproblematic reality and through a process of interpretation truth can be identified. The problem with this positivist position is that if the interpretation process is not carried out correctly according to a standardised research procedure it can be contaminated and so there has to be a great deal of care taken with the minutiae of the process. Another problem for feminists is that the 'truths' revealed in this way are usually the 'truths' of a patriarchal society that does not value women's experiences. The second position is at the other extreme and rejects the notion that there is a knowable reality that can be found through interviews. Interviews are specific to those particular people at that specific time in that place. If an interview with the same person were conducted with any of those other variables changed it would produce a different text. Single texts of interviews cannot by themselves be used to access reality, because they are accounts presented to a specific audience. This approach is appealing to many feminists because life *is* complicated and full of contradictions and we can only analyse fragile, shifting, unstable constructions. The third position represents many differing positions. Holland and Ramazanoglu adopted this for themselves. They saw it as a middle way that assumed there was

> "some level of reality that could be accessed from people's accounts, but to accept that there is no precise solution as to exactly *how* this can be done"

(Holland and Ramazanoglu 1993: 288).

As far as I am aware the children that I interviewed and observed were not conscious that they were constructing their own gender identities through the activities that they talked about or I observed. As a white, male teacher and headteacher in his fifties it could be said that I am one who, although not representative of hegemonic masculinity, has benefited from

> "the patriarchal dividend that men in general gain
> from the overall subordination of women"
> (Connell 1995: 79).

However, I prefer to think that I was bringing my background in education, my commitment to social justice and my pro-feminist interest in gender issues to the research process. These would I hoped, along with my sense of curiosity, help me to make sense of the performances of masculinity and femininity that were taking place in the classroom.

Chapter 5 - The Study

St Mark's C of E V.A. Primary School

St Mark's is a Church of England Voluntary Aided Primary School in Fordminster, a town with a history of heavy industry unusual for the largely rural area in which it is situated. It is also part of the only Education Action Zone in its local education authority. The school was built in the 1970s on the edge of Fordminster in an area that was mainly local authority housing, but where more recently several private developments have been completed. It is a popular school, always over-subscribed, and since it was first built several new classrooms have been added and several of the existing (open plan) classrooms have been extended. The programme to extend all the original classrooms has been delayed because of financial constraints. The most recent development has been a new computer suite that is large enough and sufficiently well equipped to enable a whole class (sharing computers) to use it.

Mrs Parsons, the headteacher, describes the parents as being mainly blue-collar workers. There are no children whose parents are teachers, doctors or lawyers other than one child whose mother teaches at the school. Few families from minority ethnic groups live in Fordminster and so fewer than 4% of the children at the school are from any minority ethnic groups, and these are mainly of mixed heritage. There were no children of ethnic minorities in the classes I observed over the three years. Because it is a Church of England voluntary aided school it is the governing body that has set the admissions policy for its 436 pupils. The first criterion for admission is having an older brother or sister at the school already, then it is the children of practising members of the Church of England, thirdly it is

the children of practising members of other Christian faiths and fourthly children from the locality.

> "The Governors and staff aim to provide our children with an appropriate education: working in partnership with families, all those working in and for school, the Church and the community, to the best of our ability and with the resources available, within a secure, friendly and caring Christian environment."
> (School Mission Statement)

There are five men (including the deputy head) on the staff; one in each year from Year 2 upwards. As the school is two-form entry the classes are arranged so that for most of their time in school the children should alternate between male and female teachers each year. In practice it does not always work out like that because of staff changes, so many of the children I interviewed for this study had only had one male teacher in their seven years at the school.

Jon Swain describes how boys at a school in his study used the school uniform (or their failure to wear it) as a means of fashioning their own identity and place within the peer culture (Swain 2002). St Mark's Primary School has a school uniform that appears to be more universal, though it is not as restrictive as the one at Whickham Comprehensive in Gateshead which hit the headlines in 1999 when a parent complained that girls were not permitted to wear trousers (Hugill 1999). In Rebecca Harris' class on the occasions when I visited it, all the children wore a white shirt or blouse with the school tie. They also wore a blue sweatshirt or cardigan with the school logo. Nearly everyone wore black trousers. The only people who did not wear trousers were Mrs Archer, the teaching assistant, and one of the girls, Alice, who both wore skirts.

Access

Gaining access to a suitable setting for obtaining data is often a major problem in ethnography (Hammersley and Atkinson 1995). Fortunately for me it was not too difficult, though not without its problems. Ideally I needed a school that was within reasonable travelling distance of my own school, was large enough to give pupils and teachers a choice of whether or not to participate and had a positive attitude to design and technology. There were some false starts. In the very early days of this project I was discussing it informally with two headteacher colleagues and both expressed enthusiasm for what I was trying to do and offered their own schools as possible research settings. However, when I was ready to begin data collection and contacted them there were reasons – changes of staff and staff illness – why it would no longer be possible for me to use their schools. So I had to look around again.

I eventually gained access to St Mark's through a friend who is a Reception teacher at the school. On her suggestion I telephoned the head, Mrs Parsons, who was interested in my project and gave me permission to contact Mrs Osborne, one of the Year 6 teachers, who she thought would be willing to participate. I had been hoping to work with a Year 6 class because the children would be old enough to have had several years' experience of design and technology and would, I hoped, be able to look back over these experiences and talk about them openly and freely. Another reason for choosing to work with a Year 6 class was that I had read that girls in secondary schools have a negative attitude to design and technology (Harding 1997) and that there were suspicions that this started in the primary schools (Egan 1990). If this were the case at St Mark's then I assumed it would be apparent in girls in Year 6. On the other hand if Year 6 girls were enthusiastic about the subject then at least one

primary school might be able to claim that it was not to blame for any falling off of interest in later years.

Constraints

Schools are busy places and teachers are busy people. My main constraint while engaged on this project was that I am headteacher of a small rural school with a teaching commitment of over 70% of the timetable. With the planning, teaching, marking for the class as well as the management and leadership of the school, this inevitably leaves little free time for other interests. When I informed the school governors that I was embarking on this research some congratulated me, but one very vocal and influential governor expressed considerable concern that it would interfere with my teaching and management of the school. Although I was upset by his reaction I understand that he was concerned about his own children's education and the continuing development of the school that he himself had attended. I have therefore tried hard to ensure that my own school was disrupted as little as possible – difficult when interviews with children and classroom observations have to be carried out in school time. I could not spend the amount of time that researchers such as Thorne, Francis and Skelton spent in their settings. I wish I had had more time because I did so enjoy the work in the field. One solution to this problem would have been to use my own school as the setting. In many ways it would have been easier to do this and to carry out the field work there, but I felt I was much too close to the school to do this. At that time I was teaching all the design and technology lessons in Key Stage 2 (as well as much of the rest of the curriculum) and often in Key Stage 1 as well. There would have been no other teachers to interview or observe and it might have been difficult for the children to talk to me openly about their experiences of lessons that I had taught.

Fordminster is only about fifteen minutes drive from where I work and there are several suitable primary schools there, but, fortunately, the pupils and the staff have little contact with my own school because they come under a different area of the local authority, so I did not anticipate any conflicts of interest. Nevertheless I am sure it was known to the staff that I was a headteacher in another local school and this could have affected their responses to me. However, I have been made very welcome at St Mark's and all the teachers I have worked with there have greeted me warmly. My initial study went well and Mrs Osborne told me that I could use her and her class for my fieldwork for the main study. However when it got to the time for the next round of interviews and classroom observations Mrs Osborne was pregnant and about to leave the school. This was not seen as a big problem at the time. Mrs Parsons was very supportive and said that whoever took over would be told about my project and be expected to co-operate. This was kind of her, but

> "permission from the principal does not always guarantee the co-operation of teachers or students"
> (Ball 1990: 34).

The new teacher needed time to settle in. He was very co-operative in arranging for me to interview the children, but he was new to primary education and had never taught design and technology before. In fact, although he said they would be doing some design and technology work later in the year and that I would be welcome to observe, in practice the class did not do any (or if it did, he did not inform me of its occurrence) so I was not able to carry out any classroom observations.

This left me with something of a problem and some changes of plan because I had hoped to spend my summer holiday going over all the data and beginning the process of analysis. However Mrs Rebecca Harris, who had been teaching at the school for six years originally in Year 6 and then in Year 3 for the previous two years, had now returned to Year 6 as teacher in the parallel class. She had also

taken on the responsibilities of Co-ordinator for Design and Technology. She kindly agreed to allow me to use her class to continue my collection of data. Rebecca Harris is a young enthusiastic teacher who is well regarded by her headteacher and colleagues. The children speak warmly of her and her classroom is a calm and controlled place, although it is more relaxed for practical activities such as design and technology. Barrie Thorne's

> "highpoint of juicy witnessing" (Thorne 1993: 23)

was when the regular teacher was away and she observed the class with a substitute teacher.

> "I observed for three hours and that night typed up eleven single-spaced pages of notes, rich with descriptions of gender boundaries and antagonism, sexual idioms, interactions among boys and among girls, and crossing between same-gender groups."
> (Thorne 1993: 23)

There were no situations like this when I was observing Rebecca Harris' class, although unfortunately there was one occasion when I arrived at the agreed time to observe a design and technology lesson to find that, because of an event somewhere else in the school, design and technology had been cancelled. When time is precious and has to be organised carefully situations like this can be quite a blow. However, on this particular occasion my time was not totally wasted and I was able to collect some useful background data.

It was not possible, because of the constraints of time, for me to consider participant observation by becoming a part-time teacher or classroom assistant for the duration of my research. My time was short and I had to use it to concentrate on trying to make sense of what was going on in the lessons. I had to be myself – a visitor who was interested in design and technology and the projects in which the children were engaged. I used a small spiral notebook for taking notes. I tried to be discreet, but this was not very easy and I did not

acquire Thorne's ability to write legibly without looking at what I was writing. As Thorne (1993) discovered, if I was watching the children while writing it could be noticed and commented upon.

"He's writing down everything you're saying",

said one child to two others sitting near me. As it happened I was not doing that at the time and was able to reassure them that I was not spying on their conversation. However, it made me aware of some of the dangers. It was not easy. If I just looked at my notebook while writing I could not see what was going on. The classroom was fairly small and so I just had to sit in a corner and try to melt into the background. When they had moved into their groups and had started work on their products it was possible for me then to move around the room to observe more closely what was happening. There was no 'Wendy House' for me to hide in (King 1984), but even if there had been I would not have used it for I did not want anything to come between me and the activity of the class. In fact I felt more comfortable sitting with the children in their groups helping out when asked to do so. It was a move towards participant observation, but did not help the note-taking!

My Initial Study

My initial study took place in the autumn of 1999. For this study I interviewed two teachers, Mrs Jane Bull from Key Stage 1 and Mrs Linda Osborne one of the Year 6 teachers. I also interviewed two groups of four children, one group of girls the other boys and carried out follow-up interviews with one of the boys and one of the girls. These two were chosen because they had been the quietest in the group interviews and had had least opportunity to be heard. Each of the interviews was recorded on a simple pocket-sized tape-recorder and later transcribed. The children were given copies of the tapes so that they could listen to them in their own time and check that they were happy with everything that they had said and that there was nothing that they wanted to retract or change.

There was also one classroom observation of a design and technology lesson. Although I have observed many lessons for a variety of reasons in my professional role I had not observed very many for research purposes; just one or two several years ago when I was doing my M.A. I had not planned originally to include classroom observation as part of my research at all, let alone as part of the initial study. This was partly because I was concerned about the absence from my own school, but also because I feared that the class teacher might be uncomfortable with the idea and less willing to co-operate. However I need not have worried for Linda Osborne was very pleased for me to sit in on as many lessons as I wanted.

I decided that I would use the lesson as a pilot observation to gain experience of the process and make a note of my impressions. I looked to see if I could find evidence of what the interviewees had told me and I kept brief notes of what I observed. As I know from being observed myself and from feedback from those I have observed in the past, it can be unsettling for a teacher to see someone scribbling away in a notebook during a lesson; although, because of monitoring, performance management and school self-evaluation, teachers are much more used to it than they were a few years ago. I tried to be discreet because I did not want the children to feel that I was writing about them nor did I want them reading my notes. The outcome was that my notes were rather incomplete. I resolved to be more focused in future observations. I also realised too late that it is important to build in time for full note writing as soon as possible afterwards. I omitted to do this and consequently my notes were not as full as they might have been. Another difficulty was presented by the layout of the classroom. The two Year 6 classes are accommodated in adjacent extended open plan classrooms with a shared activity area that is also used as a corridor to other classrooms. For lessons like design and technology the activity area is often used as well. It is difficult to see both parts of the classroom

at the same time and the access between the two parts of the room is quite narrow. In this particular lesson the children were continuing with work that had begun in a previous lesson and the teacher circulated giving encouragement and advice, or helped the classroom assistant to issue materials such as thread and needles to children who needed them.

The children had been designing a fabric cover for their Geography project on Kenya. The designing had been done on paper. Once they, and Mrs Osborne, were satisfied with the design they were given a piece of calico cotton for the actual cover. They used fabric crayons to draw the design onto the cotton and then used thread to emphasise or enhance the design. For example, some chose to embellish the letters of the title whilst others made manes and tails for animals they had drawn.

On the whole I was pleased with the way the initial study had gone. I was well aware that I had learned a lot over the previous few months and, perhaps more importantly, that I still had a lot more to learn about carrying out even a relatively small-scale piece of educational research. However, I was encouraged by the progress I had made and by the positive responses I had had from pupils and teachers alike. By talking to a few of the pupils and thinking carefully about what they told me I had enough to convince me that it was an area worthy of investigation. My initial reading had revealed that it was an area that had apparently been overlooked by other researchers and so I planned for the main part of my study.

The Main Study

As has been explained above (see 'Constraints') my initial fieldwork for the main study did not go as smoothly as I had hoped. However I was able to carry out six small-group interviews (three in January 2001 and three in July 2001) involving a total of seventeen children;

with six of them being interviewed on both occasions. These interviews produced some rich data and the children who were interviewed twice were consistent in their responses. Unfortunately, as explained above, it was not possible to undertake any classroom observations in this period. I wondered if I would still be able to use these data as they were not complete without the individual interviews or the classroom observations. However, when I had completed my fieldwork, I decided that I would use some of these data because they enhanced the other material I had collected and did not noticeably conflict with it.

In the autumn term of 2001 I carried out an interview with the headteacher, an interview with a group of four boys and an interview with a group of four girls. In the following weeks I observed two design and technology lessons with the class and six weeks after the group interviews I interviewed each of the eight children individually. The autumn term's project was again the textiles activity linked to their geography project on Kenya: to design and make a cover for their topic book. This was largely an individual activity – each child had to produce the cover for his or her own book - although there were opportunities for the pupils to collaborate and help one another. The main material available to them was a piece of calico, previously cut to size, which they were to decorate in an appropriate style with fabric crayons and needlework, just as the group in my initial study had done.

The design and technology topic for the spring term 2002 was to design and make a model of a shelter to protect parents waiting to meet their children after school in the event of inclement weather. The shelters were to be made from a variety of materials, as the designers thought appropriate, attached to a wooden frame. In this term I was able to observe three design and technology lessons, interview the class teacher and interview each of the children that I had interviewed in the autumn term again.

As an experienced teacher I am used to talking to children although there are not many opportunities to talk to them about their work in this way. This project gave me the opportunity to do this. It was a fascinating experience. In all the group interviews the children chatted happily, responding to each other's contributions. Sometimes they interrupted each other, talked over each other or led the conversation in a completely different direction. It was frustrating for me when they went off at a tangent or totally changed the subject (easily done because the design and technology task was often linked to another curricular area), but I was able to get them back onto my topics eventually. In these interviews I asked them about what design and technology meant to them and how they felt about it. They told me about the projects that they had enjoyed doing over their time in that school, and whether or not they thought the skills they had learned in design and technology might be useful to them in the future. They talked about the tools they had used and looked forward to doing design and technology in the secondary school, when other more impressive tools would be available, and articulated some of their hopes and also some of their anxieties about that. Inevitably some children talked more than others, although I ensured that everyone had chances to contribute.

In the individual interviews some children chatted easily and fluently, whilst others were more inhibited and quiet in their responses. I used the individual interviews to follow up items that had been mentioned in the group interviews and tried to probe a bit deeper than was possible with the groups, in a bid to clarify what was being said. For example in one of the group interviews a girl called Naomi had said,

> "We wouldn't have boys in our group."

When asked why, she said,

> "'Cos they're mad, that's why."

In the interview on her own she said that she thought the boys said stupid things and were cheeky. She also went on to say,

> "I think the girls concentrate more than the boys because the boys like being silly."

A few months later she was working happily in a group of three boys and two girls and although she still thought some of the boys were 'mad', including Matthew in her group, she was impressed by the model fire alarm that he had made. Initially she seemed to be expressing her own and others' frustration that many boys not only impair their own learning experience but also disrupt the learning of others like herself (Beckett 2001). However, later she was able to recognise that even 'mad' boys have useful skills to offer.

The teacher did not do much direct teaching in the lessons that I observed. I was not present for the first lesson of either topic, but I understand that she spent some time introducing the project and giving the children opportunities to get into groups to share ideas. She began each of the lessons when I was present by reminding the children of the project and explaining what the main task would be for that session. For most of their lessons the children in Rebecca Harris' class sat in pairs (usually boy and girl) at tables that were arranged as three sides of a rectangle with the teacher in the middle of the missing fourth, long side of the rectangle. The whiteboard was on the wall behind her. For their design and technology lessons in the autumn term they stayed in the normal arrangement because the task was essentially an individual one but when they were engaged in the shelters project they re-arranged the tables so that they could sit around them in their groups. They were encouraged to work in mixed groups of boys and girls, but single sex groups were sometimes permitted if they were 'sensible'.

Often at the beginning of the lesson Mrs Harris would demonstrate a particular skill such as how to do a particular stitch in the book cover activity or how to use a saw safely in the shelters task. Then the materials would be distributed and tools issued to those children who needed them. After this the children would get on with their work

independently, interrupted occasionally if Mrs Harris wanted to talk to them all, for example to remind them of a safety issue. She would then circulate encouraging the children and monitoring what they were doing. Mrs Archer, the teaching assistant, usually spent the lesson issuing materials to the children or supervising potentially dangerous activities such as using the hot glue gun. She tended not to circulate to the same extent as the teacher because she was usually in the activity area with the box of materials or the potentially dangerous tools.

Design and technology lessons for Mrs Harris' class were on Monday afternoons from 1:30 p.m. until about 2:30p.m. At 2:45 p.m. they all went into the hall for assembly. Before they did this they had to stack their chairs and line up. The girls would always stack their chairs carefully whilst the boys usually had a little competition to see if they could throw their chair onto the stack. There was one group where each successive boy tried to throw his chair from slightly further back than the previous one until someone missed. This was noisier than doing it carefully but neither Mrs Harris nor Mrs Archer seemed to notice. There was one line for boys and girls but in the line the children behaved like the children at Ashton School in Thorne's study by having strategies for manoeuvring so that they formed same-sex clusters. Those they stood next to in the line would be the ones they sat next to in the hall through the assembly. Just like the system at Ashton School children who tried to push in were sent to the back of the line. Some would move to the back of the line so that they could be next to their friends.

Rebecca Harris thought that it was important that the children worked together collaboratively and encouraged them to do so, but when the members of one group consisting of Alex (male), Crystal, Jack, Karen and Kirsty were complaining about one another:

> "Crystal and Karen are being bossy and not letting us do anything" (Jack)

she allowed them to split into two groups. It transpired that when the groups were being formed, this group was made up of the odd ones left over that no-one else had chosen. Jack explained it to me,

> "Well I was with Alex and Karen and Crystal didn't have anyone to go with and we didn't, so we had to go with them and then Crystal put her hand up saying we wanted Kirsty, so we had Kirsty."

When they spilt up Kirsty stayed with Jack and Alex. On the whole the groups collaborated and co-operated with each other. This did not stop them from using occasions to denigrate the work of others.

> "That looks like a dead chicken,"

said Jack about Alex's design for a shelter.

Sometimes this collaboration was a one way process. Just because pupils are in a group does not mean that they will work together, and telling them to share responsibility does not mean that they will (Letts 2001). When they were supposed to be designing their shelters Peter and Jerry spent much of their time doing other things like shaking their pencil cases like maracas and swaying to the rhythm or poking each other, and others, with their rulers. When Mrs Harris noticed this she went and sat between them for a few minutes to get them to focus their attention on the task in hand. However, after half an hour Peter and Jerry still do not have anything to show so they tried to copy Rosie's design. She moved to another place to get away from them, but Joanne, whose usual place in class was next to Jerry, moved to the place that Rosie had just vacated and let the boys copy her design.

However at end of one lesson Mrs Harris said,

> "Hands up if you think you have learnt anything over the past few weeks."

Everyone except Matthew put up a hand.

Teacher: Matthew, your hand's not up. Why?

Matthew: I haven't learnt anything. My dad taught me all

about shelters.

Teacher: We've learnt about how important it is to work together. Now who has enjoyed it?
(Everyone put a hand up.)

The children sometimes took a while to settle down to their design and technology work. Some would fiddle and fuss as ways of prevaricating. However once they had settled down they were often reluctant to stop. One day in early December Mrs Harris said:

"We have to stop this now."

There was a cry of anguish from many in the class.

"Why?" they asked.

"Because we have to go into the hall to practise songs for the Christmas play."

There was a cry from the class, "Boring!"

Chapter 6
My Analysis of What I Saw and Heard

From the first time I entered St Mark's School to talk to two of the teachers I started the process of trying to make sense of what I saw and heard. As I have outlined in Chapters 3 and 4, I wanted my work to be based on the best principles of feminist methodology. I set out to build a narrative about how gender identity is constructed through one particular area of the primary school curriculum. It was important to me that the work should be ethically sound and that my relationships with all the participants, particularly the children, should be as equal as possible. Initially I was a little disappointed that none of the children I interviewed and later observed seemed to display signs of them constructing their developing gender identities in any obvious way. I was, of course, having difficulty in making the familiar seem strange. Having spent all my working life in classrooms with primary school children, I had to stop myself making assumptions about what I was seeing and hearing and make an effort to see and hear with fresh eyes and ears.

As a result of the analysis of the data that I collected from my fieldwork, through the interviews and classroom observations, I have identified some of the ways that the children at St Mark's have used their design and technology lessons in the construction of their gender identities. It is probably not possible to produce a definitive list of all the ways children do this – every child is an individual constructing his or her own individual identity – and certainly not possible with a small sample of children and limited opportunities to observe and interview them. However, certain broad themes that I find helpful in making sense of all my data have emerged and I shall look at each of these themes in turn.

1. *Attitudes to design and technology*. In this first section I show how the pupils construct their gender identities through describing their own attitudes to the different skills that they have been able to develop in design and technology lessons.
2. *Equality of opportunity, but gender as different*. In this second section I describe how, although the children subscribe to the discourse of equal opportunities, they reinforce their own gender identity by emphasising the difference between themselves and those of the other sex.
3. *Maintaining the boundaries*. In this third section I explore some of the ways that children maintain the gender boundaries that they have constructed and deal with those who do not conform to their own gender image.
4. *Use of popular cultural resources.* In this final section I demonstrate how pupils attribute masculine and feminine qualities to the popular cultural resources that are around them, such as football, popular music and television and use them in developing their own gender identities.

Attitudes to Design and Technology

Carrie Paechter found that students in secondary schools

> "repeatedly characterized the differences between subjects in terms of physical freedom or constraint; subjects were marked as those in which one could talk or move around or, conversely, in which one had to stay still at one's desk. In this way, the (subject) discipline disciplines the embodied subject; the gendered nature of the latter has its effect on the former."
> (Paechter 2000:30)

The pupils and the teachers I interviewed enjoyed the less formal arrangement that they had in their class for design and technology. Some teachers in primary schools probably found the introduction of this new subject difficult but they did not experience the painful

difficulties that many of their colleagues in secondary schools went through competing for jobs and influence when their departments were amalgamated to create a new design and technology department (Paechter 2000). The headteacher and the teachers involved in this research project believed that design and technology was an important and enjoyable subject (I don't suppose they would have got involved in the project if they didn't) but when I asked Linda Osborne if the school thought it was important she told me:

> "Not everyone does. Some people would consider it important and other people would consider it a pain."

However the pupils I spoke to did not seem to be aware that any of their teachers had been unenthusiastic or reluctant participants other than one group noticed with regret that they had not done as much design and technology in one particular year as they usually did. The children were generally allowed to talk during the lessons and there were opportunities for them to move around the room. For me, as an observer in the classroom, this made my experience richer for I was able to watch how they spoke to one another, how they moved, how they used their bodies in doing design and technology and how they used their bodies in the development and expression of their gender identities. I could explore the gendered nature of how the lessons might discipline the embodied pupil (Paechter 2000).

Design and technology is a subject that gives the pupils opportunities to express themselves and to devise and construct improvements to the world around them. They also use it to construct and maintain their own images of themselves. On the whole the pupils at St Mark's are very positive about their work in design and technology, although some of the projects (like "Design and build a model of a shelter for parents to use on rainy days") did not seem, on the surface, to be particularly stimulating. Twyford and Burden found that primary pupils thought that design and technology was a particularly enjoyable subject (Twyford and Burden 2000) and this study supports that finding. All the pupils I interviewed talked excitedly and

positively about many of their activities in this subject, in some cases going right back to work they had done in the Reception class. Not only could they often remember with whom they had worked for the different tasks and describe in detail how they had overcome the problems they had encountered, but also what other people in the class had done. They felt that the activities gave them opportunities to have fun, be creative, make a mess and experience a little danger. Very occasionally they felt that some of the things they had to do were boring and of little interest to them but, as I shall show later in this section, sometimes these negative feelings could be seen as reinforcing their gender image.

Design and technology activities were often described as "fun", but it transpired that there were different definitions for "fun". Some of the girls gave examples of how design and technology provided opportunities for them to explore their own creativity –

> "We get to make our own designs and see how they look" (Sarah),
>
> "You can use different materials and create your own designs" (Rachel),
>
> "I did this border 'cos I thought it looked nice around the edge" (Julie).

David, too, said,

> "I enjoy it because it gives me an opportunity to be quite creative", and Colin said,
>
> "I like investigating new things to see how they work."

but several of the girls suggested that the boys found it "fun" because they saw design and technology as an opportunity

> "to mess about and be silly" (Chloe), or
>
> "just make fun of what we are doing" (Sarah).

Some of the boys seemed to agree with her.

> "Boys like to throw rubbers and all that" (Sam),
>
> "Well we don't get much work done because we're always chatting" (Dan),

> "When we're using stuff like glitter we can get a bit hyper" (Alex).

Certainly I observed several actions by the boys that were not task-related. For example, one day Leon and Patrick had a sword-fight with their rulers across the table. On another occasion I watched Paul use his ruler to poke Jerry on the bottom. Jerry spun round and glared at Paul who just grinned. However, a few minutes later Jerry got his revenge by poking Paul in a similar way with his ruler. Before the end of the lesson each had poked the other with a ruler at least one more time. Once when they were working on their fabric book covers, Jerry waved his piece of fabric round his head like a football scarf and started singing a football song. Later in that lesson, Leon, Matthew and Jack were making silly noises and monkey impressions to attract one another's attention and distract them from their work.

Several of the boys talked enthusiastically about the activities that involved glue and paint. For Colin the appeal was

> "getting messy with glue over everything."
> "I just like to get sticky" (Joe).

There was a sense of bravado about getting sticky and mucky. Indeed Matthew was keen to let everyone see how he had got smudges of fabric crayon all over his shirt, so he stood up on his chair and displayed it proudly to the rest of the class like a trophy as if to show that he had proved himself as a true boy.

Jan Harding observed that:

> "The expectations of society continue to be strongly sex-stereotyped with little recognition that its gendered nature constrains the potential development of both males and females. Boys may reject activities with a female or feminine association and girls feel less than comfortable when a masculine bias, often unrecognised by teachers, is present." (Harding 1997:25)

Andrew Stables suggested that Year 9 boys in mixed-sex schools were more prone to sex-role stereotyping than either girls or boys in single-sex schools (Stables 1990). Some boys at St Mark's were disappointed that there had been few opportunities to use wood in their design and technology lessons. It was as if they were looking for ways to develop their masculinity and considered that wood and metal were more masculine materials than food or textiles. It could be that they related the materials to an imagined adult world where working with textiles, involving creativity, is contrasted with working with wood which takes physical effort. Thus wood is made masculine through a physical performance. One of the boys, David, thought it would have made the design and technology lessons more interesting to have used wood more often. Indeed he was anxious that if he did not get the opportunity to use woodworking tools before he went to the secondary school he would be at a disadvantage when he got there and might be mocked by the other boys when he could not use them properly. He was afraid that he would be subordinated or marginalised by the other boys. This can be a deep concern for some children. Skelton found that some of the boys in the class she studied appeared to join in with the activities of the dominant boys

> "because it could have been potentially more personally damaging *not* to have colluded" (Skelton 2001: 115).

David's concern was increased when his friend Andrew said,

> "I'll be OK, I've done metalwork and woodwork at home with my dad."

Andrew's comment here illustrates how he can use his previous experience of working with wood and metal to reinforce his own masculinity.

When it came to sewing activities, both Andrew and David, like many of the other boys, felt very awkward and tried to dismiss the needlework as easy and boring.

> "I suppose it was quite easy when you think about. You

> didn't have much to do really, 'cos you just sat there going in and out" (David).
>
> "I got bored with it. I don't know why, I just couldn't be bothered to sew that long" (Andrew).

David and Andrew were claiming that needlework skills were of little value. David clearly felt that his time would have been better spent learning the woodworking skills that he felt he lacked. The sewing skills that he says were so easy did not help him to construct the masculine gender identity he craved and he felt his perceived shortage of 'manly' skills left him vulnerable to those who might position him as subordinate (Connell 1995). I suggest that by devaluing those 'feminine' skills he was disassociating himself from those he saw as possessing them (i.e. women and girls) as a means of bolstering his own masculinity. Thus he was marking out the boundaries around what were, and what were not, 'appropriate' masculine activities. (See the section 'Maintaining the Boundaries' below.) If boys and girls, for whatever reason, attribute gender labels to their activities in school at this early age it is not surprising that Andrew Stables, working with older pupils, found that

> "enjoyment/interest, ability and careers were the foremost considerations in students' minds when they chose subjects"[for GCSE or A-level] (Stables 1996:107).

Consequently

> "girls were more likely to opt for typing, childcare, French, geography and home economics and boys for physics, computer studies, technology, woodwork and history" (Stables 1996:159).

By way of a contrast the girls were generally confident about their sewing activities even if they did not enjoy them very much, but although they were looking forward to woodwork and metalwork at the secondary school:

> "It's new and we haven't done it before" (Lucy)

they were often anxious that they might get injured when working with these materials. Some of the girls placed themselves in the 'helpless female' discourse when talking about woodwork and changed their voices when they said,

> "A grown up needs to be with you because you can still cut your finger when you're older," (Megan), or
> "I don't trust myself with a saw, I don't think I've got a steady hand." (Leah).
> "In the next school I'm not really looking forward to it, right, 'cos we'll use saws and sharp knives and that, and you can cut your finger or something, and it might be really bad." (Kelly)

They did not express similar fears about sharp needles which could be just as dangerous.

> "I remember digging it [a needle] in and I caught my finger, but it was alright" (Melanie).
> "I pricked my finger a few times at first, but it was good fun." (Kelly)

Other girls, though, who had had experience with wood at home were much more cavalier about those experiences. Connie had the group of girls laughing when she recounted, with a chuckle,

> "I did some woodwork once and I had a hammer and I didn't know what to do so I just got a hammer and went 'Whack!' and I whacked and the wood just went 'piaoow!'"

Where David and Andrew devalued sewing as easy and boring, Connie dismissed the importance and possible threat of woodwork, a symbol of masculinity, by reducing it to farce.

In the classroom the boys would frequently criticise and demean the efforts of the girls. When Hazel was sawing some wood, Bradley said,

> "I'm not safe here with Hazel sawing",

although Hazel was sawing very competently; and after Joanne had helped Jerry overcome a difficulty he was having with his work he did not thank her or praise her for coming to his aid he said:

"She's a bossy old fart"

possibly because he could not admit that he had needed her assistance. Nilan has observed that girls frequently have to tolerate appalling behaviour from boys, but they are not passive victims (Nilan 2000). Sometimes the girls at St Mark's managed to get their own back by taking advantage of the boys' own desire to parade their masculinity.

Naomi and Joanne designed a board game called 'Ladybirds and Spiders'. They took delight in teasing the boys with this game. If a player landed on a spider then he or she had to pick up a card and carry out the instructions written on it. The spider cards were designed with boys in mind and had 'dares' on them; for example, "Knock the teacher's pen pot over", "Do something naughty in front of the teacher" or "Ask one of the girls to go out with you." Naomi was delighted with the success of this game for the boys had to accept the challenge or be seen as a 'wimp' in front of the girls and their mates; and it confirmed her view that boys are stupid and girls are smart. For some boys to 'get one over on the teacher' is a symbol of meeting the standards of hegemonic masculinity (Skelton 1997) and so perhaps the boys also saw this as an opportunity to prove their masculinity. Whatever, there was also the added advantage for Naomi that if the boy was caught by the teacher or rebuffed by the girl it would provide her with further entertainment – further proof of the superiority of girls. Through incidents like this the children play out the constant struggles over the boundaries between what it is to be a girl or a boy.

McGraw found that Year 11 students in a school in Sydney listed "cooking" and "sewing" among the subjects that they thought were

not important to learn at school. They were seen as skills to be learnt at home. However

> "several students - predominantly male students – saw the traditionally masculine technical subjects such as woodwork and construction as important for gaining basic skills that enable you to be more independent and self-reliant in the home."
> (McGraw 2002:12)

The children that I interviewed think that design and technology is a useful and worthwhile subject, although, when pressed, they are vague about what use it might be to them beyond sewing on buttons, cooking meals or doing odd-jobs around the house. David conceded,

> "I suppose sewing will come in handy if someone never got married and they got a hole in their socks and couldn't afford to buy new ones,"

and Colin said you have got to learn to cook because

> "you can't go round McDonald's every day."

Woodwork would be useful

> "if you became a carpenter" (Michael) or
> "wanted to make things in the garden" (Helen).

Michael's comment reflects McGraw's finding that as students get towards the end of their school days they tend to have a utilitarian perception of knowledge so that a subject's value will depend on how useful it is in getting one a job or providing basic skills (McGraw 2002).

David's view that sewing was only useful to a poor male who did not get married is another example of the low value that so many of the boys placed on it. Michael, too, thought that learning cooking at school would be useful because,

> "It could help you make food if you're not married and you live on your own, then you could cook things."

So we have the assumption that married men do not mend their own clothes or cook their own meals. Presumably that is because these

are activities that men engage in only if they cannot find someone else, by implication someone inferior, to do these chores for them.

There is not much evidence of awareness among the pupils yet of the view expressed by Mrs Parsons, the headteacher,

> "There is a place for [design and technology] in the primary curriculum because this is a society in which children are going to be required to be inventive and think about products and their packaging."

Of course, just because none of the children linked their work in design and technology with the needs of industry and wider society does not mean that they are not aware of them, nor that they will not be able to develop the skills they have been learning and use them at work in the future.

Design and technology is a subject that children enjoy for all sorts of reasons. It is a practical subject that usually has a product at the end of it. Because the lessons are more relaxed than for other areas of the curriculum and, because it involves using their bodies and enables them to move around the classroom, it provides them with lots of opportunities to interact with others and to perform their masculinity or femininity. It is a link with the adult world.

Equality of Opportunity But Gender as Different

Although in the past primary schools have been less likely to have equal opportunities policies than secondary schools (Madden 2000), St Mark's has had a policy, updated from time to time, for several years. The policy at the time of this study (see Appendix A) states that it was developed collectively by the whole staff

> "with significant involvement of the pupils".

It covers gender, ethnicity, religious belief and disability and the stated intention is to enable all pupils to reach their full potential and

ensure equality of access to a broad and balanced curriculum. In addition to this the policy for design and technology states,

> "Children are given equal opportunities regardless of sex or ability."

Among the aims of the equal opportunities policy are the desire to challenge and eliminate prejudice, discrimination and stereotyping; to develop a positive and caring attitude to people of all communities; to promote positive images and expectations and to work towards equality of outcome as a measure of success. Many ways are identified for achieving these aims covering, for example, awareness of language, displays and use of the playgrounds; behaviour policy and sanctions; ensuring that resources are free from cultural bias; equal access to resources, equipment and toys; and creating an environment in which co-operation is central as well as making it clear that sexist and racist abuse are unacceptable. There is also an Equal Opportunities Policy for Personnel to ensure that all employees and job applicants are also treated fairly (See Appendix B).

The principles of the equal opportunities at St Mark's can be seen in the pupils. Like those in Becky Francis' study (Francis 1998) they drew upon the equal opportunities discourses in their responses to my questions and rejected the notions that girls and boys should be treated differently or offered different activities. Indeed they felt sorry for their parents who did not have the same range of opportunities in design and technology as they have had.

> "In the olden days when our parents were at school, I think it was a bit sexist. It's better now" (Patrick).
> "No, I reckon it's not fair that the girls didn't get to do what the boys done, and the boys didn't get to do what the girls done" (Daisy);
> "I don't think it was fair that ladies weren't allowed to do woodwork and things the boys were allowed

> to do, 'cos I don't think that I would have wanted to do knitting that much" (Chloe).

Whilst they recognised the inequalities of life in the past, they also saw equality as a matter of fairness.

> "When we made sweets, we all made sweets. When we done bomb shelters, we all made bomb shelters. We all do the same thing, 'cos if they make it different it wouldn't really be fair." (Tim)

The teachers also claimed it was very rare for a child to suggest that he or she did not want to participate in a particular activity because it was not appropriate for his or her sex. I was told that if such a situation did arise it was dealt with firmly. Mrs Bull told me that she had a boy once who said he wouldn't do music and movement because boys don't dance,

> "'Yes, they do,' I said and that was that."

Andrew Stables has suggested that the expression 'equal opportunities' is more often than not taken to mean 'increased opportunities for women' and this is clearly the aim of the headteacher at St Mark's.

Mrs Parsons is keen that girls are not disadvantaged or limited in their opportunities:

> "I guess it's being a female head, but I always push the fact that the girls can do anything. They don't have to be nurses. I've just sat down and taught a chess lesson to Year Threes for a chess tournament. I said, 'The queen is the most important person on the board, but of course we all know that women are important.' So if anything I tend to go the other way. The fact that it's not just boys on the computer, that girls can do it too. We're all here to do it to the best of our ability, whether we are a boy or girl is not important."

Mrs Parsons attributes her particular commitment to equal opportunities to women and girls. Stables has shown that, whereas opportunities for education for girls have increased all over the world, there has been no such increase of opportunity for boys to enrol in traditionally female areas of education. (Stables 1996). He has concluded that

> "'Equal opportunities' does not seem to carry the implication that more boys should study childcare or home economics." (Stables 1996:144)

However, it is the policy at St Mark's

> "To take steps to build the skills and confidence of children in areas where they may traditionally be lacking in confidence, e.g. dance or sewing for boys, football or construction for girls." (Appendix A)

so the school is committed to supporting children at this level, as are the teachers to whom I spoke. Girls play football at St Mark's and

> "One of the best at sewing was a boy who had to mend his own trousers if he ripped them" (Linda Osborne).

Could it be that this level of involvement, with just one girl in the school football team and a boy who enjoys sewing, reassures the teachers that they are fulfilling their obligations to equal opportunities whilst gender differences continue to be perpetuated? Stables' point is that 'girls' subjects' have lower prestige than those associated with boys and consequently, although more girls are studying traditionally 'boys' subjects', fewer boys than ever wish to study subjects with a feminine association (Stables 1996). Thus we are danger of perpetuating the idea that 'masculine' things are the desirable norm and 'feminine' things are positioned as 'Other' (Paechter 1998). There have been reports of widespread boys' underachievement elsewhere in Britain (Holland 1998) but Mrs Parsons told me that St Mark's is one of the few schools in the local education authority that does not have a big discrepancy between boys and girls results in the National Test scores (SATs). The boys at St Mark's do well in their tests. Perhaps underneath this she has a sneaking concern that

if there is general underachievement by boys, then the girls at St Mark's ought to be doing even better!

Bob Connell has reminded us that

> "sex differences, on almost every psychological trait measured, are either non-existent or fairly small".
> (Connell 1995: 21)

However, as Francis observed,

> "it is the dominant discourse of gender dichotomy which children largely draw upon as the foundation of their own constructed gender identities"
> (Francis 1998: 163).

I think this is because of the power of cultural influences such as compulsory heterosexuality (Connell 1995; Epstein 1998), hegemonic masculinity (Connell 1995) and the sort of contradictory discourse that was identified by Volman and Ten Dam (1998). The children feel they need to be clear about their own sex and then they can establish their own gender identity by demonstrating that they are different from the other sex.

Thorne observed that when the class teacher allowed the pupils to choose their own desks the boys sat on one side of the room and the girls sat on the other side (Thorne 1993). Others have observed that this pattern starts early in life. Hoffmann and Powlishta observed children aged between 28 months and 67 months old in classrooms in day care centres on the campus of a university and reported that

> "when observed during free-play periods, the children spent significantly more time with same-sex peers than would be expected by chance."
> (Hoffmann and Powlishta 2001: 309)

This could not be simply attributed to different play styles. Sims et al observing children aged three years old in childcare centres in Australia came to a similar conclusion. They wondered whether the children who regularly attend such childcare centres are more likely

to develop gender-segregated behaviours than those who do not attend them. They warned that if this is the case then professionals working in this field have a responsibility to be aware of this and develop strategies to address the issues in order that such behaviours do not become reinforced to the disadvantage of the girls (Sims et al 1998).

In St Mark's they attempt to intervene in these processes. It is the school's policy that whenever possible boys and girls should work together. In Rebecca Harris' Year 6 class the children sit at tables in pairs of one boy and one girl. Although she thought that most of the boys were stupid, Chloe could see advantages in this:

> "I sit next to Tommy. I didn't really like him, but he's one of my best friends now 'cos I sit next to him. We help each other in work and things, if we're stuck on a question."

Many primary school teachers prefer to mix girls and boys in this way. It could be that they do this in line with an equal opportunities discourse - for example Sue D'Arcy deliberately organised her classes in mixed groups because she had been horrified to see boys in other classes refuse to sit in chairs previously occupied by girls (D'Arcy 1990) - or to give boys an opportunity to develop a new vision of masculinity that opposes patriarchy (Jackson 1998), but there are those who would doubt this. As Skelton observed, the teachers do not do this as a strategy for enhancing and developing the girls' education but as a means of controlling the behaviour of boys – the girls have a civilising effect - with a view to tackling their perceived underachievement (Skelton 2001). This is not a new idea for Foucault pointed out how the supervision of individuals is simplified if each has his or her own assigned individual place and he gives Jean-Baptiste de La Salle's advice from 1783

> "that an unruly and frivolous pupil should be placed between two who are well behaved and serious."
> (Foucault 1977:147)

Whenever there is a group activity in design and technology at St Mark's the groups would normally reflect the classroom pattern and include both boys and girls. However the children will often try to manipulate this group situation to suit their own ends, by, for example, splitting into two sub-groups. Simon Warren found that the boys ignored the mixed groups in which they were seated, however they were arranged, preferring to seek cooperation or help from other boys even when it would have been easier to ask a girl (Warren 2003b). At St Mark's they arranged themselves just like the children in Jordan's study who, in spite of the teacher's efforts to prevent the children doing so, determinedly sorted themselves by sex (Jordan 1995). Sometimes this was quite deliberate because the girls became exasperated with some of the boys -

> "Joe and Max were being stupid and made a mess of it so me and Kirsty got on with it together" (Sarah)

but at other times they seemed less aware that they had actually split by sex rather by interest

> "Jacob, Tim and Robert went off together because they wanted to do a different kind of box and me and Amy did our own" (Rachel).

However the outcome was the same – they worked separately.

Sometimes the teacher would allow the children to choose their own groups but emphasised that the groups should be sensible.

Jack: We choosed our own groups, but it had to be girls and boys.
Alex: Sensible.
Jack: No it was all boys and one girl.
Dan: It had to be sensible.
JH: It had to be sensible. Right. What does that mean?
Jack: Like Matthew and Tommy, Lance and Jerry.
JH: What about them?
Alex: They're not a good mixture.

JH: Oh right. So there were girls in your group?

Jack: Yeah just one. Hazel.

Sam: We didn't have none. We made a game called Bomber Man.

JH: And there were no girls in your group? Why was that?

Jack: Hazel had come back from somewhere and she had to go somewhere and the teacher put her in ours.

JH: But you said you had to be in mixed groups.

Dan: No we didn't have to be.

Alex: As long as it was a sensible group.

So the boys were given the choice of having girls or sensible boys in their groups. The implication here is that the teacher believes that the girls are sensible (Francis 1998) and possibly that the boys would seek to construct their masculine identity through confrontations between them (Skelton 2001) or outdoing each other in their silly behaviour. It could be that the teacher sees girls as pacifiers of boys. Jack told me on another occasion that he felt there were advantages in being in a mixed group:

> "It's fun, because some of the girls are brainy and, like, some of us boys are not so intelligent so sometimes if the girls are brainy and they're right, we just stick with their answers mostly."

Jack, who had occasional lessons with the special educational needs teacher because of his below average reading ability, found that the more able girls would spend time helping him with his work when he was stuck whereas the more able boys tended to ignore him or make fun of him. Jack often found himself in a mixed group because the popular boys would not choose him to be in their group. However he was able to view this as a positive situation because he felt that his work improved. He also found that some of the girls would defer to him in woodworking activities and this helped him to boost his self-

esteem and masculine image. There is an example of Kirsty doing this later in this section.

The girls seem to like the boys in their class, but given a choice they would prefer to be in single sex groups for they are contemptuous of those who are silly and attention seeking and so distance themselves from them. Performing masculinity can be a very public attention-seeking process for boys. If they are not big and tough, or in the football team, they seem to need to draw attention to themselves in other ways. This is one area where the girls emphasise the differences between themselves and boys by stressing on many occasions how silly the boys can be.

> "Some boys are just stupid, aren't they?" (Kelly)
> "I think they just want to be noticed" (Rachel).
> "The boys like to mess around and be silly. It takes about ten minutes for them to get into the idea that they've got to work and not be silly" (Chloe).

In this way they can highlight their own difference from boys and therefore their own femininity.

> "They just show off. Lee Richards shows off in front of the girls all the time." (Naomi)

I overheard comments in the classroom during the lessons such as:

> "Matthew give me the saw, I'm sensible. Not like you!" (Emmie)
> "You stupid boy, give me that." (Rosie to Jerry)
> "Come on, stop messing about with that." (Joanne to Peter)

as the girls got exasperated with their partners for not doing as they were supposed to be doing.

Thus the girls position themselves as different from the boys, i.e. as careful, sensible and attentive.

> "In my world everything has to be neat." (Kirsty)
> "I'm moving over here so I can get on with my work." (Rosie)
> "I think the girls concentrate more than the boys, because

> the boys like being silly." (Naomi)
>
> "We were trying to listen to what Mrs Harris was saying." (Connie).

When Daisy musingly suggested,

> "I think boys should have a day turned into girls and girls should turn into boys just for one day to see what it was like,"

Emily could not disguise her horror as she retorted quite emphatically,

> "No! I don't want to be a boy!"

However, I think there is more to it than that. Naomi was concerned that some of the boys prevented her from getting on with her own work.

> "Some of the boys do concentrate, but some just get put off and then they put me off."

Naomi and the others seem to be frustrated that the boys are spoiling things for them by disrupting their work, and for themselves by not getting on with their own work. These boys seem unable to help themselves because this is the way that boys, if they are to perform as 'real' boys, must construct their gender identities. They do this, for example, by making silly noises to attract each other's attention, doing monkey impressions or by being noisy and hitting others. It seems to Chloe that the boys must carry out this performance (of being boys by messing around and being silly) for about ten minutes before they can get on with their work. The girls' attitudes are similar to Becket's view that boys would be able to achieve more in school if they were helped to question the part that dominant constructions of masculinity play in their lives (Becket 2001). Bronwyn Davies (1993) maintained that the boys themselves believed that they should not be dominating the girls but were faced with the problem that this was at odds with their need to achieve a masculinity that was recognisable in hegemonic terms.

Mass culture, recycling stereotypical images, generally assumes there is one fixed masculinity (Nilan 2000), but this is not the case. It is important that boys are educated so that they understand that there are many forms of masculinity. As they get older there could be opportunities for them to question the assumptions they make about what it is to be a boy or a man, and to see that the boys who are quiet and attentive are successfully constructing their own gender identities.

Thorne (1993) noticed that children sometimes construct 'boys' and 'girls' as rival groups. Generally the girls were proud of their ability in needlework, even if it was only recently acquired. Helen was keen to draw my attention to how neat her work was and to compare it with the sewing that the boys had done.

> "When I was on my third line some boys were still on their third stitch. The boys were no good at even the running stitch."

Helen recognised that although some things have changed, the gender division of labour - particularly in the home - has not, for she concluded,

> "You're bound to have to do some sewing, 'cos, I mean, men aren't going to do that sort of thing."

Helen felt that she needed a variety of skills because

> "boys aren't going to do all the work in the garden, are they?"

Becky Francis reflects on the strong and assertive women who are successful in their careers, but become passive and dependent, melting into the fairy tale role for women, whenever a man appears in their lives (Francis 1998). I did not witness any fairy tale romances in the classroom, but I saw girls defer to boys on more than one occasion. Chloe, Suzie, Steve and Tommy were in a group together. Chloe and Suzie were struggling to cut a piece of wood with a small coping saw.

Chloe: I'm glad we're not in an all-girl group. The girls are better at planning, but the boys are better at doing it.

Tommy: Here let us do it!

Steve: I'm good at woodwork. I do it with my Dad.

The girls stood back and let the boys take over the sawing. Although they did it with a flourish and great confidence they were not noticeably more successful than the girls. Similarly when Kirsty and Jack were trying to drill a hole in a piece of wood, Jack had the drill and Kirsty was trying to position the wood in the drilling jig, but couldn't see the mark they had made on the wood. Jack said,

"Move it! I said 'Move it!'"

Kirsty moved to let him in. Then Jack waved his hand and said,

"Give me the pen! I need the pen!"

and Kirsty meekly handed it over. On another occasion Leanne was having a little difficulty putting a piece of wood in the sawing jig. She was just beginning to solve the problem when Lee said,

"Let the boys sort it out."

Leanne let him take over without protest. It seemed to me that Jack and Lee were positioning themselves as the assertive male taking command of the situation and rescuing the helpless female. Although Jack could be loud and silly both he and Lee were quite timid in the company of other boys. I do not think they would have talked to many of the boys in the class in the way they spoke to Kirsty and Leanne. These situations gave them the opportunity to position themselves as superior, by positioning the girls as inferior. Steve was able to strengthen his position by drawing on a strong symbol of masculinity – his Dad. Davies wrote about the country girls who felt that they could do anything that a man or boy could do but would look feminine, including appearing vulnerable, to attract the right sort of man. Davies emphasised that the girls believed they had agency and chose to act in this way (Davies 1993). Perhaps Chloe, Suzie, Kirsty and Leanne were using this strategy to maintain their femininity.

Maintaining the Boundaries

I have shown how boys and girls use everyday activities to construct and reinforce their own gender identities. As part of this construction of their own identities they also construct boundaries to masculinity and femininity to situate themselves inside the one and outside the other. Sometimes these boundaries can be seen in the children's activities – for example when they are playing in single-sex groups and an individual wants to join an activity controlled by the other sex – but they seem to disappear when the children are together in a relaxed collaborative pastime.

However, not all children will accept the dichotomy drawn up by others. Occasionally there will be children who seem to cross this boundary - what Thorne calls

> "crossing the gender divide" (Thorne 1993: 111).

Davies writes about Anna who told her that she had wanted to be a boy since she was two years old (Davies 1993). Children who do not fit into the stereotypical image for their sex have often been labelled 'sissies' or 'tomboys'. As Thorne reminds us there are countless examples of 'sissies' and 'tomboys' in popular culture, children's fiction and anecdotes of childhood. A tomboy is

> "a high-spirited romping girl; a girl with boyish looks, dress, habits etc." (The Chambers Dictionary 1998: 1746);

so someone who rejects stereotyped 'feminine' behaviour. Naomi told me that she has been described as a tomboy, although she would not describe herself in that way. It was Naomi who declared

> "We wouldn't have boys in our group [...] 'cos they're all mad, that's why".

She is proud of the fact that she plays football and cricket and says she doesn't care that some people call her a tomboy. Naomi doesn't want to be a boy,

> "'Cos they're dumb."

Although she says she gets on well with the boys in her class she also says,

"The boys don't like me."

She believes herself to be superior to them

"They're alright, but they're silly."

While the teacher was introducing the project on 'shelters' that involved working with wood, Naomi was able to show that she was ready for action by placing her pencil behind her ear in the style of a carpenter. Naomi was keen to be the first in her group to have a turn at sawing the wood by holding on to the saw and not letting go. She describes the other girls in the class as "nice" but was also keen to distance herself from some of them when she talked of Chloe by saying,

"She's a pretty girl, she doesn't like getting messy.
Look at her nails!"

(Chloe's nails were varnished and decorated.)

It is unfortunate that the term 'tomboy' exists because, although it is a term used to describe one who rebels against them, in practice it perpetuates gender stereotypes. The implication is that a girl who behaves in this way must be deviant – a pseudo boy. In addition to marginalising Naomi by calling her tomboy, other children have other ways of declaring her position invalid. For example Chloe said of her,

"Oh she does rabbit on a bit a lot of the time. She
doesn't know what she's talking about."

Naomi loves playing sport. One day in the classroom when Naomi was again proudly telling me that she played football, rugby and cricket Jack shouted out,

"She's rubbish at football!"

Naomi is in the school football team but Jack is not. However, Naomi has shown that she does not conform to other people's stereotypes and can use a range of resources to construct her gender identity. She is similar to Anna, the tomboy in Davies' study, who displays many features of maleness but maintains her femininity through

being caring and kind (Davies 1993). Naomi told me she likes to wear

"the fashion for girls' clothes"

and her model of a carnival float featured a friendly-looking lion surrounded by flowers, butterflies and ladybirds. So, although there are some in her class who want to position her as tomboy – a deviant who should be marginalised - she does not want to be positioned in this way.

"I don't, like, wear boys' clothes or anything."

Naomi prefers a more eclectic position and chooses to use softer more conventional emblems of femininity along with those more often associated with masculinity in the construction of her own gender identity.

Thorne (1993) describes a sissy as a

"failed male" (p116).

No child was described in my hearing as 'sissy', but the headteacher told me that she had heard of some 'more sensitive' boys at the school who had been called sissies because they did not play football. I do not know if the culprits were punished, but she told me that sometimes she talks to all the boys and tells them,

"You don't have to play football to be a man."

Thorne carried out her research in the USA and it is more common in England in the present day to use the word "girl" as a term of abuse for a boy whose masculinity is in question. One boy, Tim, who proudly told me that he enjoyed sewing, was acknowledged by the rest of his group to be the boy who was best at needlework. This did not earn him any respect from them, though, because they pointed out that he was also the best at skipping – better than most of the girls.

Michael: In sewing, the girls they do more sewing. I don't know why but they just do better sewing than the boys. 'Cos I can't sew.

When we had a practice go ...

Tim: I can.

Michael: Tim can, I can't. We had a practice and I done one stitch and then got all tangled up.

Tim: Yeah.

Joe: I did mine, but I kept leaving massive gaps so I got bigger.

Tim: His stitches were about that big [indicates with index finger and thumb] and the gaps were about that big.

Nathan: Yes, 'cos when we were in P.E., Tim, when we go skipping, he was the only boy that can actually beat the girls. All of us kept getting our feet tangled up – well we didn't want to win that race.

M & J: No.

Why did Nathan suddenly start talking about a physical education lesson in a discussion about sewing? The boys talk about Tim wholly in relation to sewing and skipping. Nathan's implication is that because Tim was good at sewing and at skipping he was almost female and therefore not a true boy at all. 'Real' men do not sew (Francis 1998; Skelton 2001) nor do they skip, presumably. There is no one form of hegemonic masculinity (Skelton 2001) but Kenway and Fitzclarence (1997) have explained how in our culture at the present time hegemonic masculinity "mobilises around" (p121) qualities like physical strength, adventurousness, competitiveness and individuality and distances itself from the feminine for the feminine is deemed less worthy. Tim had shown that he was strong and competitive by winning the skipping race, but because his classmates associated skipping with girls, winning a skipping race was not a worthy achievement any more than being able to sew neatly was. Nathan points out that the boys were physically capable of skipping, but did not want to do it because, for them, there was no

point in the activity. This contrasts strongly with their attitude to football and the desire to win. Connell (1995) has explained that not many men (or boys, presumably) match the normative standards of hegemonic masculinity, but they have a relationship of complicity with it and consequently do benefit from the patriarchal dividend. Nathan, who was quiet and delicate, musical rather than sporty, was able to position Tim, who was strong and athletic, in a subordinate masculinity by his remarks and Michael and Joe were also able to benefit. By defining the boundary of masculinity with themselves well inside it and someone like Tim on the boundary – or even outside it – Nathan, Michael and Joe were able to enhance their own self-perception and self-esteem.

Use of Popular Cultural Resources

Children in school are growing up immersed in the popular culture of our times. Our cultural commodities are made as attractive and desirable as possible so that we will want to purchase them and use them in our own communications (Willis 2000). It has been said that the spending power of children aged between nine and thirteen in the UK is rising faster than any other group and there is a range of products that are aimed at this age group (Kehily 2003). The biggest influences are sport, music and television and, even if they come from families that are not especially interested in these elements of our culture, it would seem to be difficult for the children at St Mark's to remain unaware of them. This is because much of the children's conversation revolves around these entertainments. My study shows that the children use aspects of the culture around them in the designs of their products as a way of constructing and maintaining their own gender identity, but this process is also evident in the unofficial curriculum, for example in conversations and other personal interactions.

Football

Joanne, one of the girls in Rebecca Harris' class, summed up the boys with:

> "Boys usually play football, and in class they're usually talking a lot and being silly."

One of the main things they talk about is football. For example, one day Alex was bragging about how during the lunch break he had kicked the ball so far it had gone out the gate and he had had to go and fetch it. This led to a lively, conversation about football and footballers – about which player had the biggest kick, and so on. Each of the boys who took part in this conversation spoke with enthusiasm and authority. On other occasions boys talked about their favourite teams and matches they had watched on television. Occasionally those that were in the school team talked about matches they had played in. Skelton (1997) and Swain (2000) have shown how football is a major component of successful (heterosexual) masculinity for boys of primary school age and Warren (2003a) has illustrated how some boys can draw power from an heroic masculine past through their knowledge of footballing history. Indeed the authorities are trying to exploit this importance by using football as a stimulus to address boys' underachievement (Skelton 2000; DfES 2001). Children have been the targets of aggressive marketing for products with a football connection and they have been encouraged to demonstrate their loyalty to particular teams by purchasing and wearing replica shirts. Although many of the boys play other games and may have a personal interest in sports other than football, it is football that brings them together to the extent that girls are often excluded (Francis 1998). As Jack told me:

> "Mostly the girls don't play football apart from one, Naomi."

Naomi was the girl that was described, in the previous section, by some of the others as being a tomboy.

Unlike the pupils at Deneway School in Oldchester (Skelton 2000) who had a big club in their own city, there are no Premier or First Division football teams within easy travelling distance of Fordminster for the St Mark's pupils to watch and support. The nearest league team (second division) is about 40 miles away. Despite this, football is important for most of the boys at St Mark's. They play football in the playground, are keen to be in the school football team and talk about matches they have seen on television. With this degree of interest it is not surprising that some of the boys try to incorporate references to football in their classwork; and their design and technology activities - even needlework and food technology - are no exception to that.

One of the activities that the children recounted that they had done was to embroider a bookmark in Year 3. For this they used Binka (a fabric with large holes that enable a blunt embroidery needle to pass through easily) and coloured threads. The group of boys that I interviewed for my initial study in 1999 told me how they had embroidered the names of their favourite football teams on their bookmarks whereas the girls following the teacher's suggestion had written "Happy Easter" or had used their own names, or those of members of their families (to give them as presents).

Tim:	We had to write something. 'Happy Easter' didn't we?
Michael:	Some of us did our favourite football teams. Sam Hodges done Leeds United so did George.
Joseph:	I did Man United.
JH:	Did you write 'Manchester United', or just 'Man United'?
Joseph:	'Man U T D', to make it shorter.
Michael:	Mine said 'Arsenal'.

Joseph: 'Manchester' would have been too long, or I would have had to do it really small.

The following year the next group of boys also tried to use the names of football clubs for this task, but met with some difficulties.

"Connor put the name of a football team on it but he weren't allowed. He got told off and had to do it again" (Andrew).

Andrew would have liked to have embroidered 'Man Utd' (the abbreviation for Manchester United) on his bookmark because

"it would have been more interesting than just sewing doing patterns and it would have made a nice bookmark, too."

He felt it was unfair that they had not been permitted to do this. Andrew seems to be discursively setting up boundaries around his idea of male activities and female activities. In Andrew's opinion sewing is a female activity and supporting Manchester United is a male activity. Thus he sets up a physical relationship with a powerful part of the adult male world. Paechter (2000) has pointed out that boys use P.E. to affirm and perform hegemonic masculinity. Andrew also points to a hierarchy of activities and he places male activities higher than female activities. Boys' things are interesting but girls' things are not interesting. Sewing, according to Andrew, is not interesting. However, he suggested it could be given some value and made interesting – and so move up the hierarchical scale because, by default, 'interesting' things are male - by linking it with a male interest, Manchester United. The activity itself would have still been just the same – forming a pattern of stitches on a strip of fabric using a needle and thread – but because the product, the bookmark, could be linked with a top football team it would have enhanced status.

Football images were also used by some boys in other projects such as one food technology activity that involved making sweets and another where the children made biscuits. Michael explained to me

how, for his sweets, he had rolled up fondant icing and chocolate to make little balls and let them go hard.

> "They were little footballs. It was on an England football theme. The box was about that big [*about 30cms square*] and had all decorations like, say, England World Cup Campaign."

Dan's class made some biscuits.

> "We could have food colouring, raisins, chocolate chips and we could design it whatever shape we wanted it, like a triangle or a square or something. I made mine round to look a bit like footballs and we took them to bake on a tray."

One term, when the task was to design and make a board game, some of the boys created 'Soccer Monopoly' based on popular football teams. Instead of 'Old Kent Road', 'Mayfair' and so on they had team names such as 'Arsenal' and 'Tottenham Hotspur'. On another occasion when they were told to design a quiz as an ICT activity several of the boys produced football quizzes. As far as I am aware, none of the girls used football images in their designs.

Michael had enjoyed making his sweet footballs because

> "they were tasty and chocolatey and we got sticky hands 'cos we used to stick our hands in the chocolate to get some to roll it up."

This activity appealed to him because it was messy, gave him an opportunity to involve football and he could eat the product at the end. When asked if he thought the sweet-making activity was 'girls' stuff' he said, "Partly", but he couldn't elaborate on why he thought that. I think he saw the basic food technology task as a female activity in the same way that Andrew did with the embroidery, but he was able to reassign it by linking it with football. Then he was able to reinforce that new designation by emphasising how sticky and messy it was working with the fondant icing and chocolate. This is an example of how Michael constructed his masculinity as a 'public'

activity. The football image was prominent for all to see and he was able to draw attention to himself and his de-feminising of the activity by getting messy in the process. Thus he was strengthening his masculinity whilst distancing himself from feminine behaviour. (See 'Equality of Opportunity, but Gender as Different'.)

> "Hegemony refers to cultural dominance in the society as a whole" (Connell 1995: 78).

Hegemonic masculinities are constructed in relation to other subordinate masculinities and femininities. Schools are major sites where boys learn to develop and refine their masculine identities and Swain has explained how school policies and the way that football is organised can have a significant effect on how football is played and used as a symbol of masculinity (Swain 2000). The boys who wanted to use football images in their needlework and food technology products were (probably unconsciously) rejecting symbols of subordinate masculinities or femininity and instead trying to tap into the power source of the hegemonic masculinity. Unlike the boys at Skelton's Deneway Primary School, they could not wear the strip of their favourite team to school for they had to wear their school uniform, but they did have pencil cases, hold-all bags and other souvenirs branded with the names of famous football teams. By publicly demonstrating their allegiance to a team they were using these cultural resources to assist them in the construction of their identities, which inevitably entailed their gender identity; thus they could benefit from the patriarchal dividend (Connell 1995). The headteacher's concern was not necessarily to prevent them doing that, although it was clear that she wanted to provide support to those pupils in the subordinate groups by diluting the power of the hegemonic masculinity.

Mrs Parsons, the headteacher, is not happy about the boys' preoccupation with football because she believes it can encourage unsociable and violent behaviour. She is concerned that pupils who

are not interested in football are called 'wimps and poofters' and this is what led to the ban on pupils using football images in their work. However, she does use the boys' obsession with football to control them.

> "I won't have macho behaviour on the football field. If they're not well behaved, if they don't treat visiting players with respect they don't get into the team. If they don't behave well in class they don't get in the team. That's one of my punishments."

Mrs Parsons' attitude is interesting because it seems to run counter to the spirit of initiatives such as 'Playing for Success'. This is a scheme where the government in partnership with football clubs (and in a later phase cricket clubs), businesses and LEAs has established learning centres at football clubs. The government is concerned about perceived underachievement of boys (Warren 2003b) and so the plan is for the centres to use the medium of football to motivate pupils and concentrate on improving their literacy and numeracy. As a result of this programme the pupils taking part have improved significantly (DfES 2001). However, it seems to me that Mrs Parsons was aware of the power of football as a symbol of hegemonic masculinity (although she would not use that vocabulary) and consequently she was more concerned with the wider issues of social justice (Skelton 2000). Her grandson attends the school and is in Year 3. She told me that he is concerned because his friends have told him that now he is in Key Stage 2 he will have to play football and he does not want to. He does not see football as a necessary symbol of masculinity. She would like to support him and others who feel the same. However, Warren found that even boys who did not exemplify the strong physical presence associated with successful footballers saw this attribute as important to their perception of 'What is good about being a boy' (Warren 2003a). There are other images and symbols closely associated with masculinity (see Other Cultural

Resources, below) but currently football has a dominant position for primary school boys.

Music

A more powerful form of cultural capital than football is musical knowledge (Paechter 2000). Classical music probably has acquired its powerful cultural position because of its upper class associations, and traditionally school music, particularly in secondary schools, has meant classical music. However, music is generally considered to be a marginal subject in most schools (Paechter 2000) and secondary school pupils do not think it is very important (McGraw 2002) or like it very much (Stables and Wikeley 1997). All the musical traditions of the West (classical, jazz and popular music) have generally masculine connotations because the most famous composers and solo performers are male – although, in contrast, most of the pupils who learn to play musical instruments and take part in extra-curricular school music activities are girls (Green 1997; Paechter 2000). Green points out that because musical performance has been characterised as a 'feminine' pastime this has had a negative effect on the availability of music education for boys (Green 1997).

Teachers say that:

> "girls play a certain *type* of instrument, often described as traditional or orchestral, most notably the flute and violin." (Green 1997:153)

When children take part in musical performances in school they are not only learning how to perform music but they are also negotiating their gender identities. By singing and playing orchestral or keyboard instruments girls are affirming their femininity whereas boys assert their masculinity through performing popular music, playing drums and electric instruments or using electronic technology (Green 1997). Indeed it would seem that

> "pupils and teachers collude with each other in the

perpetuation of the gender politics of music" (Green 1997:186).

Several of the children in Rebecca Harris' Year 6 class learn to play the keyboard, flute or clarinet. They have their lessons during the school day and most seem to slip out of class and return quietly without causing too much disturbance - although on one occasion when I was there Matthew, the only boy in the class to have such lessons, came back from his drum lesson vigorously playing an imaginary drum solo trying to draw attention to himself and distracting the others from their work. I saw this as him using these flamboyant actions as a means of reinforcing his masculine gender identity, and distancing himself from the quiet arrival of the others – all girls. The more relaxed atmosphere of the design and technology lesson provided him with an opportunity to do this. The children seemed to enjoy their instrument lessons, but they were not very forthcoming in talking to me about them. Like the girls in Green's study they were modest about their achievements.

"Yes, I play the flute but I'm not very good at it." (Karen)

"I'm learning to play the violin. It's alright, but I don't talk about it in class." (Rosie)

Rather than talking about their own performances, they were more interested in talking about pop songs in general, their particular favourite songs and the performances of others.

"My Mum is going to try to get us tickets to see S Club 7." (Connie)

"I had the Kylie CD for my birthday. It's good." (Rosie)

"My sister thinks Westlife are cool." (Karen)

One day, as they were working on their Kenyan project book covers, some of the girls were talking about a forthcoming birthday party and sleepover. They talked about what clothes and records they might take.

Again, because design and technology lessons were less formal than many other lessons, the pupils were able to use them to discuss

other things while they got on with their work. Their interest in music is not surprising because popular music is part of the popular culture to which primary aged children have easy access.

> "92 per cent of young people regularly listen to the radio, 87 per cent listen to records/tapes" (Willis 2000: 48).

Children also see and hear music performed on television. Sometimes on television they will see the artist performing the song and at other times they will see a video which may or may not feature the artist. Studies of these videos show a high-level of sex-role stereotyping (Seidman 1999). These present role models for children and young people that they choose to accept or reject. Usually they are very closely linked to the popular music of the time and potentially this increases the scope of their influence because the video image could well be re-played in the mind every time a person hears the record - even when there is no actual video playing. During one lesson Lisa, Rosie and Connie gave an impromptu demonstration of a dance routine that they had seen their favourite group, S Club 7, perform on television the previous weekend.

It was not just in the unofficial activities that popular music appeared. The children I talked to and observed did use some of the images associated with popular music in their design and technology work and in their own gender constructions. For example, when they were doing a design and technology project that linked in with a science topic on 'sound', the children were given the choice of either making a simple musical instrument or some ear-muffs that would muffle the sound. Most of the boys made guitars or drums using resistant materials such as wood, plastic and card. Lucy Green found that teachers characterise boys as extroverts or show offs (Green 1997) and this view of masculinity as requiring public enactment was supported by the actions of some of the boys at St Mark's. As Dan was telling me about how he made his guitar he and Alex were

playing 'air guitars' – imagining themselves to be playing their instruments in a rock band.

Alex: In Year 5 we done guitars. It was for science and we made guitars or ear-muffs.

JH: Were you doing 'Sound'?

Dan: Yes, and most boys chose to make a guitar.

JH Why was that do you think?

Jack: Because they might have been easier to make.

Dan: I made a guitar. Me and Alex wanted to be on *Top of the Pops.*

Alex: Yeah.

Jack: Some people made a harp.

Sam: Emmy's was good because she made a harp.

Dan: It weren't very strong, though. Someone broke it.

Alex: Most of the girls made ear-muffs.

JH: What did you do then, Sam?

Sam: I made a guitar.

JH: You made a guitar?

Alex: Yeah, Sam made an electric guitar. It was great!

[More 'air guitar' actions.]

Here we see the Alex and Dan contrasting their work with that of some of the girls. They praised a boy's work because he had made a model of an electric guitar but dismissed the girls' work as inferior either because it was not strong and got broken or because they had made ear-muffs.

The girls made the ear-muffs using an artificial fur fabric. They were pleased with what they had made.

Joanne: We liked the soft furry material.

Melanie: It gave us a chance to practise our sewing.

Joanne: Yeah, we sat down with a piece of furry fabric and got on with it.

Megan: Mine worked, and it was cosy on my ears.

We see again how the girls (some of whom can actually play musical instruments) adopted a passive role, choosing not to perform, while the extrovert boys (who do not play instruments) perform their masculinity by *pretending* to play guitars.

Talking about another occasion in the past on which they had made sock puppets Daisy explained,

> "I made a Spice Girls sock puppet, so did the other girls. The boys made a snake, or a spider, or a beetle."

At that time The Spice Girls was a very popular female singing group. Their slogan was 'Girl Power' and Daisy and her friends admired them, and saw in them a positive female image. Girls could draw on this strong positive image in developing their own positive gender identities and Daisy was able to contrast it with the boys' choices of creepy crawlies. Rosie was able to draw on it when she spent ten minutes of a design and technology lesson carefully decorating her pencil case with "Girls R Best".

The Spice Girls presented themselves as bright, powerful and aggressive young women whose records, videos and books were aimed at girls (Driscoll 1999) – although boys (and adults) could buy them too. They have been seen as challenging to patriarchal society because they do not fit the little girl stereotype of passive, romantic or nurturing (Brabazon and Evans 1998).

> "Spice Girls' fandom might demand less dramatic changes to girls' positions within established political and social systems than does participation in the riots and resistances of some other forms of girl culture. But the Spice Girls do call for significantly changed relations to the lives of girls as they are." (Driscoll 1999: 188)

What it was that the Spice Girls symbolised for them we cannot tell, but Daisy and her friends at St Mark's were able to take these gutsy, 'girlie' images and use them in their own representations, just as the

boys could utilise the flamboyant actions of playing an imaginary guitar or drum kit to reinforce their own images of themselves. The girls could draw on these strong, positive female images, and sometimes did, but it was more common for them to take a more passive position.

The introduction of design and technology has brought with it a growing tendency for work to involve resistant materials which traditionally have been used by boys in school. However, once pupils get the opportunity in Year 9 to specialise in their design and technology work it tends to be the boys who opt for resistant materials and the girls who follow food or textile courses (Paechter 2000). It would seem that at St Mark's the pupils in this group have made this move early on and have already gendered the materials.

Many girls and women do play guitars and drums but one more frequently sees men playing these instruments in television shows. So the boys made model instruments which they used to perform as male celebrities while the girls, one hopes not already disciplining themselves into being 'docile bodies' (Foucault 1977), sit on the side-lines.

> "Adolescent girls may use the rejection of P.E. and work in resistant materials as a way of asserting a passive femininity in the face of stereotypes of the active, technologically manipulative body as masculine."
> (Paechter 2000:58)

Joanne and most of her friends rejected the opportunity to make guitars or other musical instruments using the hard resistant materials and chose instead to use the soft fabric for this particular science/design and technology task. On the occasions when the girls did use positive female images, like the Spice Girls, it was in a textiles activity making puppets.

Television

On average children in the USA spend more time in front of the television each year than they do in class at school (Reading Today 2002) and it is quite possible that this is also the situation in the United Kingdom because British people spend over twenty hours every week watching television (Willis 2000). Most of the children's experience of professional sport and music is through coverage on television and radio, for television is a very powerful medium that provides most of the cultural events in the children's lives. People generally consider that watching television is a passive activity carried out by couch potatoes, but Willis suggests that it is a very active process that involves, initially, selection and argument about what to watch and, subsequently, talk and arguments about what is being watched (Willis 2000). Seiter, however, suggests it is more of a one-way process. She warns that we need to be more aware of the ways that

> "television organizes, distorts, and expresses gender and race differences" (Seiter 1995:6).

Furthermore she believes that childhood and parenthood

> "are expressed through and mediated by television, advertising and consumer goods " (Seiter 1995:6).

When this resource in the home has such power, it is not surprising that the children draw on some of these programmes during their design and technology lessons. When the children made their own board games many of them used ideas from soap operas and cartoons, so that there were games based on *Coronation Street, Neighbours*, *Eastenders, Pokemon, Scooby Doo* and *The Simpsons.* When they made masks Winnie the Pooh and Sabrina the Teenage Witch were popular among the girls whilst Kenny from *South Park* and Bart Simpson were popular among the boys.

One of the attractions of design and technology for the children is that because of the more relaxed atmosphere in the classroom there are opportunities for the children to talk to one another while getting on with the task. Chloe pointed out,

> "It's quite relaxing 'cos you just stitch away and talk to your friends and everything."

Indeed one of the teachers, Linda Osborne, said,

> "That's the good thing about D&T, you can talk about other things while you are doing it."

Some of the time they talk about the task in hand and how to solve the problems that they encounter, but more often their conversations are about other topics. The girls often talked about what they had watched on television the previous evening.

> "We talk about if we've watched *East Enders* last night, and what we're doing tomorrow and sort of things like that," (Joanne)

and I heard several of the girls discussing this and other similar programmes when I was in the classroom with them. The popular soap operas such as *Neighbours* and *Coronation Street* often featured. In doing this they relate themselves to the characters in the drama, aligning themselves with or distancing themselves from those characters and their situations and developing their gender identity through the shared experience of discussing and reliving the programmes with their friends.

> "Femininity is constructed by way of negotiating meanings about what it means to be female that swirl through these representational forms" (Proweller 1998:13).

Kennedy reminds us that television is never neutral. It is always portraying events and dramas through someone's choice of words and pictures (Kennedy 2001). She suggests that television is a gendered medium providing, for example, feminine pleasures for

women with soap operas and masculine pleasures for men through televised sport.

> "Just as 'women's media' help construct femininity for a female audience, so 'men's media' may help construct masculinity for men. And the prime example of men's media is televised sports programming."
> (Kennedy 2000: 57)

Kennedy shows through her analysis of television coverage of football and women's tennis (Kennedy 2000; 2001) the masculine narrative that dominates the coverage of much sport on television. Boys are able to access this masculine narrative and use it in their own dialogue to bolster their own position in the group and to develop their own masculine identity (Warren 2003a).

WWF (World Wrestling Federation) events are staged performances of fake violence that attract large crowds at the arenas where they take place. Indeed it has been suggested that members of the audience

> "stage their own performances as spectators to fully enjoy and participate in the event"
> (Communication Studies 298, 2000: 539).

There is also a strong following for the coverage of the events on television which is how most of those who follow it in the UK, like Dan (one of the boys at St Mark's), are able to watch it. The image it projects is of strong, muscular masculinity engaged in battles between good and evil, but using simplistic sexist stereotypes. Dan, who was a quiet, rather slight member of the class, used the WWF images in a design and technology project he worked on (see 'Other cultural resources' below), and by associating himself with these violent muscle-men was able to utilise this image in the maintenance of his own gender identity.

There are concerns that television does not reflect the world as it is and that many viewers, particularly children, are unable to tell the

difference between symbolic and social reality (Signorielli and Kahlberg 2001). The world as represented by television drama has not kept up with changes in society particularly with regard to working women. It seems that married women are portrayed with reduced options, largely in traditional female jobs, and there are fears that the career choices of children and adolescents who are exposed to a great deal of television may suffer (Signorielli and Kahlberg 2001). If this is so then it is more likely that boys and girls in school will shy away from being adventurous and remain within the stereotypical images for their design and technology work. It also makes it less likely that they will engage with the aspects of design and technology that are traditionally associated with the other sex.

Children who watch a lot of television are also exposed to a large number of advertisements – sometimes without realising it. Kenway and Bullen wrote about some children who said that they got their ideas about which branded clothes to wear from 'The Simpsons' – but they presumably meant from the advertisements around the programme as the characters wear the same clothes all the time (Kenway and Bullen 2001). Larson's work in the USA has shown that many of the advertisements aimed at children show girls in stereotypical domestic settings unless they are sharing the scene with boys, in which case they will be in a more adventurous setting (Larson 2001). Advertisements for toys were generally stereotyped with boys featuring in advertisements for video games and action figures while girls on their own were likely to be advertising Barbie dolls or other fashion figures. Dan, who used wrestling images in his work, had several of the WWF wrestling figures and Joanne told me how she had used the sewing skills she had learned in design and technology to make clothes for her Barbie dolls using scraps of fabric. While Lucy and Sian were telling me about the sweets they had made, Daisy and Emily started singing the jingle from a television advertisement for sweets. It is not clear how much children draw on these representations, but they do have an impact and if

children are exposed to stereotypical images for much of their waking hours then there are fewer opportunities to experience a wider range of possibilities. As I have shown, football has a significant influence on the boys at St Mark's, but their 'experience' of the male world of football – the matches and the discussions – has been mainly through television.

Other cultural resources

The use of football and violent images described above are examples of how the boys manipulated their design and technology projects to assist them in the construction of their own gender identities. However, once football images were banned, this option was denied them and they had to rely on other ways of developing and reinforcing their masculinity. A simple way of doing this was to criticise and demean the ideas and designs that the girls suggested.

> "They just make fun of what we are doing" (Sarah).
>
> "They just wouldn't choose. If we had an idea they'd just go, 'No we don't want that, think of another idea', but they wouldn't agree" (Joanne).

One can be negative a few times but eventually they had to either accept the others' suggestion or come up with an alternative. Although football has a dominant position in the conversations of most of these boys, those who were not so interested in or knowledgeable about football also needed suitable themes or images for their work. A common alternative was to use other images such as sports cars, war, guns and space ships that are often associated with dominant masculinity:

> "We made a game called Bomber Man" (Sam)
>
> "We made something like Snakes and Ladders but it was, um, like the Devil and that and if you landed on the Devil you had to go back to the start" (Dan)

or turned the objects around them into toys associated with violence. Matthew held a piece of tubing in his hand like a pistol and called out,

"Look at my gun,"

whilst Jerry and Peter used their rulers as swords. Connie complained that Bradley turned a person she was drawing for her Kenyan project book cover into an alien by adding some antennae. On the day when I arrived in the classroom to find that design and technology had been cancelled, the children were just about to begin writing a story in their English books. In her introduction to the lesson the class-teacher Rebecca Harris said,

"No aliens, or bombs, or shooting in this story."

There were loud groans and mutterings from the boys, but the girls did not seem to mind this restriction. Rebecca Harris explained to me afterwards that, in her experience, when the children wrote stories with aliens, bombs or shooting in them they had difficulty developing their characters and the plots of their stories. She hoped that with this limitation they would be able to write richer and more interesting stories. Her restriction was not intended to punish or penalise the boys. Unfortunately, I do not know whether or not she was successful in this ambition, but it denied the boys the possibility of using these simple masculine symbols for their stories. However, there are many other masculine images they could have used and so I am sure they would have found suitable alternatives if they wanted them.

The girls, too, needed to engage in what Francis calls

"gender category maintenance work" (Francis 1998: 10).

Whereas the boys used football, aliens and violence, for example, to symbolise their masculinity, the girls used softer images such as ladybirds, cuddly animals – rabbits seem to have been very popular - and flowers. So Megan's puppet was a rabbit made out of felt.

"We started with the fabric. It was felt. And we had to make up a design. I made a rabbit. And we drew the

> rabbit on the felt and we cut it out and we drawn round another one on the felt, yeah, we cut that one out and we sewed them together and then we, like, sewed around the outside."

Melanie embroidered 'a little face of my rabbit' on a place mat, Emily and Lucy made rabbits from paper mâché and Joanne even tried to make some bread in the shape of a rabbit – it was not very successful. While Dan was making his football-shaped biscuits, Naomi had been designing and making biscuits in the shape of hedgehogs with seeds to represent the spines. Daisy was proud of the dolphin she had embroidered while Joanne and Naomi designed a game called Ladybirds and Spiders. The ladybirds symbolised pleasant things and the spiders symbolised unpleasant things. While Michael was making his football sweets, Sarah was making Star Roamers and Kelly was making Strawberry Pops. The Star Roamers were so named because they were stars made from Milky Way bars covered in fondant icing with hundreds and thousands for decoration. Where Michael wanted his sweets to be accurate models of the real thing the girls went for a more artistic interpretation. The following year the children favoured alliteration in the names of their sweets so there was Ben's Boisterous Bangers and Mark's Menacing Mites from the boys and Sian's Spectacular Spanish Spangles and Lucy's Luscious Lemons from the girls. Notice how the boys chose more aggressive names for their products.

Fordminster is famous for its annual carnival when over a hundred floats, lit up with thousands of light bulbs, parade through the town. It is the major event of the year for many people in Fordminster and more than 100,000 people squeeze into its streets on a November evening to watch the parade pass by. In 2001 the Year 6 children at St Mark's were asked to design their own model carnival float as a homework activity during the autumn half-term break. For this task based on a local cultural activity the children borrowed from the wider popular culture just as the designers and builders of the real floats

do. Dan's float featured a macho theme that is very popular with boys of his age, the WWF wrestlers. There was a wrestling ring with aggressive looking models of the television wrestlers in and around it. Joanne's float showed Peter Pan on a Pirate ship decorated with flowers and fairies. Joanne had softened the violence of a pirate ship with her choice of decorations. In a similar way Connie, who continued the Kenya theme with zebras, giraffes, trees and a village with scenes of domesticity, had included some snakes - but they had friendly smiley faces.

One day at the end of the afternoon Rebecca Harris had some leaflets about an educational website to distribute and asked the children to put up their hands if they had access to the internet at home. Nearly all the children put up their hands. Both boys and girls talked enthusiastically about using computers at home and at school. Computer games, predominantly aimed at the children's and youth market (Buckingham 2003), have been a significant growth area in recent years and are possibly more important to some youngsters as a strand of popular culture than music or television. Despite this I can find no mention in any of my interviews or classroom observations of any children using the images from computer games. This could be for a number of reasons including my inadequate knowledge or weak observation skills. I was not conscious of this when I was interviewing and observing the children or I would have pursued it. It has only occurred to me as I have been analysing the data. It could be, of course, that these children are not particularly interested in computer games or that they did not find these images useful for their work in design and technology. Perhaps, other than Sonic the Hedgehog and Lara Croft, there are no dominating single images used by the designers of these games that the children could appropriate and use in their own designs. I will have to leave it to another time or other people to resolve this.

The pupils who used cultural resources in the designs of their design and technology products chose to do so. There is a wide, but far from infinite, range of images around them that they access mainly through the broadcast and print media. The children chose these particular emblems because they found them interesting or they represented something for them. In this section of my thesis I have sought to make sense of the images and identify what they mean for the children. In doing this - by using the ideas that inform my theoretical framework - I have shown how the children have drawn on them in developing their own gender identities.

Chapter 7 – Conclusions

In this thesis I have shown that children draw on a range of cultural resources as they construct their gender identities in the context of the design and technology classroom. Although I have tried to interpret them honestly, my findings in this study inevitably have been filtered through my own understandings of what I saw and heard. Nevertheless I did use opportunities in follow up interviews, for example, to test some of my ideas. I certainly have no desire to misrepresent anyone, but it is possible that in seizing on items that interested me I may well have attached greater significance to conversations and interactions than the participants would have done. However, I hope that I have made it clear throughout this thesis that what I have written has been affected by me as a pro-feminist, me as a male teaching headteacher, me as a researcher, me as a doctoral candidate, me as John. My intention was to make this explicit so that readers can make their own judgements about my approach and possibly about my findings as well.

Through the interviews that I carried out I have been collecting narratives about the children and design and technology. Because I framed my questions in particular ways I was also collecting narratives about the children and gender. However there was also another kind of narrative that I was collecting – a physical narrative – through observing the children work and interact with each other and the materials and equipment they used. In doing this I was involved in a process of trying to make sense of what they were saying and doing, but more than this, in writing about it I was also *making* sense by producing another narrative.

Boys and Girls

In this ethnographic study of children in school working in one particular area of the curriculum I have sought to establish and develop the claim that children construct, develop and maintain their gender identities through interacting with the people and cultures around them. My focus has been on how children use these cultural resources, their design and technology lessons and themselves and those around them in this process. Children are social actors performing the masculinity or femininity that they feel is appropriate for the time and place in which they find themselves. It is quite possible that they would perform differently in a different place or at a different time or with different people. They need, everybody needs, a way of identifying themselves and of being identified by others as a meaningful person. We cannot determine how others will position us or identify us and so, when it is important to individuals how others do position them, they have to perform in a way that they feel matches that position and hope that the significant other agrees.

There are many ways of grouping or dividing people in our society that people have used when they wanted to do so, such as age, 'race', religion, class and intelligence, but it is sex that is the most powerful because of its assumed lack of ambiguity. Age is numeric and precise but, although boundaries to certain activities are established based on precise age, these are fairly arbitrary - as are any measures of intelligence that give the illusion of precision. 'Race', religion and class are also imprecise categories with blurred edges and there can be many arguments about the 'race', religion or class to which a particular individual belongs – or indeed whether terms like 'race' have any useful meaning. There is less doubt about the dichotomous nature of sex or gender. As far as society is concerned one is either male or female. Society does not easily tolerate ambiguity or uncertainty. Although doctors may be able to

change the physical features to make a male resemble a female or a female to resemble a male, if the final result is unconvincing to those they meet they are likely to encounter hostility (Griggs 1998). So a child is either a boy or a girl never both, rarely neither, and this may explain why the dualisms in our thinking about gender are so deep (Thorne 1993). Even with babies it seems that the people who meet them need to know whether they are boys or girls, and some parents get upset if one gets it wrong. However, to concentrate on this dichotomy disguises the complexity and changing nature of gender meanings. It has been easy to assume that children are divided into two discrete types, but things are not that simple. There are many ways of being boys just as there are many ways of being girls and many of these ways overlap. People are constantly reinforcing their own gender identity. They will attempt to extend it to increase the ways they can perform as male or female, but will also reduce their options to more stereotypical positions if their sexuality is questioned. I have shown some of the different means that children use to construct their own gender identities. However they are not just working on their own identities they are helping others to construct theirs and sometimes they will attempt to control potential deviants that do not fit their pattern of what masculine or feminine should be. So the boundaries are policed by calling those who try to cross them 'tomboys' or 'girlies', teasing them by saying that they are in love, or by suggesting that they are inferior in some way. While engaged on this study I became aware of how the people around me were trying to control the way I present myself. On one occasion a male friend with whom I play cricket drew attention to the pinkness of the perfectly ordinary Marks and Spencer shirt I was wearing and asked if I was expressing my 'feminine side' or had I joined Gay Liberation. On another occasion a female colleague observed that my purple socks were colour co-ordinated with my shirt and tie and suggested that now I only needed a handbag to complete the set. Both remarks were made with a smile as a form of humour, but I suspect that my choice of clothing had made them feel uncomfortable in some way.

Fortunately these incidents did not cause me to abandon these particular items of clothing or to change my style of dress although they might have done when I was younger.

Others have shown how schools, like most institutions in Western society, reinforce compulsory heterosexuality (Connell 1995; Epstein 1998; Paechter 1998), but I have argued that schools should continue to encourage boys and girls to work together and relate as friends and collaborators rather than as rivals or potential romantic partners. If this is to happen so that children can have a wider range of choices when constructing their narratives of self then the gender dichotomy itself must be deconstructed.

Cultural Resources

Cultural influences are very powerful particularly when they are stereotypes. I found that children's attitudes to design and technology were often influenced by perceptions that were connected to stereotypical images. The children are aware of many of the features of the popular culture around them and by consciously and explicitly linking themselves to certain cultural resources they link themselves to certain perceptions of self. I have shown how the children used sporting and musical images in their work. Paechter has pointed out that design and technology, physical education and music are marginalised subjects. She notes that they are also those

> "most bound up with the body, bodily display and physical labour. It should not be surprising, therefore, to find that their marginality is deeply gendered." (Paechter 2000:62)

Boys, to be boys, must associate themselves with other boys. They do this, for example, by performing their masculinity through being loud and boisterous and by talking about football and wrestling, by using football images in their work, and by keeping away from those

things that they associate with girls. I have shown that when they find themselves having to interact with things that they associate with girls – such as preparing food or doing needlework – then they will attempt to masculinise them by using masculine images, such as football, cars or guns, in their work or denigrate them as easy, boring or of no value. The girls associate themselves with other girls by talking to those other girls about things like pop music and soap operas and by making fun of those things that seem to be masculine as if pricking the bubble of puffed up masculine pomposity. So while they are learning and developing their designing and making skills the children are constructing their gender identities using whatever resources from their culture come to hand. As I showed in the previous chapter, to the children at St Mark's even the materials they use are gendered so that rigid materials such as wood, metal and plastic are masculine and soft, furry fabrics are feminine.

Television is an important means by which children have access to their culture. Television is not neutral, because every programme has been planned and produced by people with their own views and opinions. Some programme makers are better at disguising or compensating for their own particular prejudices than others. Programme makers have to keep within budgets and time allocations and sometimes take short cuts by using stereotypical images. Advertisements and pop videos, because they have to be short and snappy, are particularly prone to this (Seidman 1999; Larson 2001). The children then replicate or adapt these images in their work.

It is through television that the boys at St Mark's get their experiences of professional football. Football is of major cultural importance for boys even when they are not particularly interested in it. This is because it symbolises the hegemonic masculinity and provides an almost universal topic of conversation for them (Swain 2000; Skelton 2001; Warren 2003a). I have witnessed boys in my own school, when meeting others from another school for the first

time, ask, "Which team do you support?" as an introductory question – even at occasions that had nothing to do with football. Through playing and talking about football many boys identify themselves with other boys. I have shown how they use these images in the construction of their design and technology artefacts and to give relevance to needlework and cooking skills they associate with females, but also in the construction and maintenance of their own gender identities.

Implications for future professional policy and practice in design and technology in the primary school

I share with Barrie Thorne the long-term aim of eliminating the gender stereotyping of tasks and activities. Schools can make a difference, but they are inevitably constrained by all the other influences in their pupils' lives. Schools should continue to work towards opening up and widening opportunities for boys and girls of all backgrounds to work together and collaborate. Design and technology is an area of the curriculum that can provide such opportunities for successful collaboration. Rebecca Harris, at St Mark's, was keen that the children should be able to share experiences as equals learning with and from each other unaffected by the sex of the partner(s) in the activity. If this sex blindness is to be achieved then teachers will have to intervene to encourage their pupils to work in mixed groups as she has done. As Thorne (1993) observed this is difficult to achieve successfully when pupils insult and tease one another because of their sex or the 'inappropriate' activities or groups in which they participate. It is not made easier when politicians, concerned about the apparent under achievement of boys, sound as if they blame it on situations such as the perceived lack of suitable male role models and a lack of suitable 'masculine' reading materials in schools (Warren 2003a). However, when one observes the children genuinely collaborating and showing mutual respect irrespective of the sex of those with whom they are co-

operating one becomes more hopeful. My study suggests that small groups of just two or three children are likely to be more successful at collaborating in this way. Bigger groups are more likely to split and the split is most likely to be into single-sex sub-groups.

It is important that all children have the opportunity to develop their designing, making and appraising skills as early as possible through design and technology so that all pupils can participate fully (Rogers 1998). However, teachers, too, must realise that equality of opportunity is more than ensuring that girls are not disadvantaged. They should ensure that their plans include activities that provide opportunities for boys (as well as girls) to develop their caring skills (perhaps by working with or designing products for younger children) and to see that working with textiles and food can be creative, useful and *interesting* occupations.

If boys and girls are going to have confidence in themselves and their own images of themselves so that they are able to be

> "gentle and caring or adventurous and assertive without being constructed as strange or erroneous"
> (Francis 1998:167)

then these qualities should be emphasised as positive whoever it is that possesses them. People *are* kind and courageous, strong and caring, tough and gentle. These are not mutually exclusive qualities and boys should be aware that there are many forms of masculinity. However, although schools can and should give a lead it is of no use for them to pretend that society's gender differences do not exist. Children will soon see through that. There are those outside of school (and probably many inside schools, too) that would prefer to strengthen the power of the gender dichotomy; to create and promote differences between boys and girls. What could be done is to encourage children to think about their own position and stimulate them to question what they see and hear, and to examine how it is that things are the way they are (Skelton 2001). It is important that all

primary school children participate in all the design and technology activities offered by their schools in order to develop the range of skills that are available. It has been shown that if pupils or students have a choice of whether or not to participate in certain aspects of the subject, stereotyping operates and the gendered nature of society is reinforced (Harding 1997).

This study has shown that primary school pupils enjoy their design and technology lessons and have a positive approach to their work. They draw on the equal opportunities discourse and reject suggestions that boys and girls should be treated differently or have a different curriculum. Teachers can help boys to question the influence of dominant constructions of masculinity in their lives and provide them with examples of men in a whole range of positive roles, including working with food and textiles.

St Mark's School does not appear to suffer from the violence and the bad behaviour described by some researchers (Jordan 1995; Skelton 1997,2001; Kenway and Fitzclarence 1997; Dixon 1997). Whether this is because of the ethos and policies of the school, the attitude of the headteacher and staff, the homes and families of the children, the children themselves or for other reasons, it is not possible to say. There are violent exchanges sometimes, but these are rare. The boys tend to draw on discourses of being loud and silly rather than aggressive or violent. I have described how Mrs Parsons explained to me that she does not tolerate 'macho' or disrespectful behaviour in the school. Offenders are given opportunities to moderate their behaviour with warnings or 'target cards' and then banned from football for a period of time. The ultimate sanction is exclusion, but Mrs Parsons says that she has never had to use that, although she says she would if she had to.

This is the stick, but the emphasis is on the carrot. I think St Mark's School is a school where the pupils feel valued. Staff and pupils are

encouraged and expected to co-operate with one another and to respect one another's views. Children who are unkind or thoughtless are encouraged to think about how they might have dealt with the situation in a more satisfactory way. They are set targets to help them to be more positive and constructive. However, as I have tried to show, even in this seemingly enlightened and caring school the children still use similar resources in the construction of their gender identities to those used by children in other studies.

My work has built on the work of others, in particular Barrie Thorne, Becky Francis, Christine Skelton and Carrie Paechter. Thorne (1993) focused on the gender issues in children's play in primary school in the United States of America, Francis (1998) showed how children constructed their gender identities in the role play situations she set up, and Skelton (2001) focused on the boys in the schools in the North East of England that she used for her research. My study is set in the South West of England, concerns both boys and girls but specifically looks at one small area of the curriculum – design and technology. Carrie Paechter worked with design and technology teachers at the painful time when the subject was introduced in schools under the National Curriculum but her work was based in secondary schools. I believe that my study has explored an area that has been neglected in the past. Nevertheless I have only managed to scratch the surface. However this 'scratch' has revealed a rich seam which suggests that a further study looking at the wider design and technology programmes of study could provide more fascinating insights into how children use the curriculum in this way.

Much of the work around gender construction so far has been centred on secondary schools rather than primary schools and, of the work in the primary sector little has related gender construction to a specific area of the curriculum. Experience of the curriculum is a dominant feature of school life – particularly since the introduction of the National Curriculum – and yet it is not a developed area of

research. Thus there is clearly scope for further or more detailed work looking at the school curriculum and gender construction. There is much more that could be done to explore the ways that pupils themselves use the cultural resources of the curriculum, but also the wider cultural resources, in their gender work. Little mention has been made of those pupils who go about constructing their gender identities quietly in less ostentatious ways. There is scope to explore how they use the people and things around them in this process. I hope that others will have the chance to use my work in developing their own ideas for pursuing these issues.

The way forward?

How can I, and others involved in schools, take this work forward? Self-evaluation is a way of life for schools in England. The new Ofsted framework for inspections encourages and takes account of a school's self-evaluation (Ofsted 2003) and headteachers are encouraged by their LEAs, as part of the on-going monitoring of their schools, to carry out an annual review of the work of the school. Thus they are better prepared to complete the self-evaluation form (S4) when the notification of the inspection arrives. Schools can use this process to establish how they currently deal with gender issues, such as those that I have identified in this study, and to assist them in working out strategies to address them more effectively in the future. The following questions might help them in this process:

- What classroom strategies do teachers employ to ensure that all pupils get a fair deal? To answer this, one needs to think about how one creates classrooms and playgrounds where pupils feel confident and happy; where they have access to and are able to participate in the whole curriculum; where they are able to work without disruption, interference or harassment; where they can be themselves and where they and their work are valued. The teachers need to be sure that there are no areas of the curriculum or areas of the classroom

and play areas that are gendered. Similarly they need to be sure that pupils have access to a wide range of books and other resources, materials and equipment – none of which are gendered or seen as specifically for boys or girls.

- How does the school prevent discrimination and what strategies do teachers employ to deal with sexism and racism (or any other forms of discrimination when they arise)? Apart from overt discrimination schools need to be aware of how pupils relate to one another and the extent to which they respect each other. How can they eliminate the use of terms such as 'gay', 'girlie' or 'lezzie' as abuse?
- What strategies has the school used to ensure that all pupils feel included? Schools need to think about what they do to ensure that no pupils feel left out; that there is no fixed 'normal' situation that positions any child as 'other'.
- What strategies does the school use to increase the awareness of the whole school community to gender issues? Governors, teachers, teaching assistants, lunchtime supervisors, administrative and other staff as well as any voluntary helpers need to be clear on the school's policies in this area and to implement them consistently. One important way for schools to address this is through maximizing their use of professional development.

Professional Development

None of the teachers I spoke to at St Mark's, nor the headteacher, commented on any professional development or training that they had had relating to gender issues or even equal opportunities. I suspect that few teachers in primary schools currently have the opportunity to read and engage with the academic research on gender and education. It is mainly through work for my M.A., and more recently my work for the Doctorate in Education, that I have had the opportunity to familiarise myself, and consequently the staff

in my own school, with the research in this field. In my local authority the education department is now known as the Lifelong Learning Directorate to emphasise that learning is not something that only takes place between the years of 5 and 18, or whatever. Learning *is* a life-long process and schools, of all places, should reflect this. Headteachers, senior managers and governors need to ask themselves some questions, such as:

- To what extent is their school a learning organisation? They could reflect on the opportunities they provide for the continuing professional development of non-teaching staff and governors, and the extent to which they work in partnership with parents as complementary educators.
- What opportunities are there for teachers to extend their own learning beyond the bland DfES PowerPoint and video presentations instructing them on how to deliver the National Primary Strategies?
- How can the school support and encourage its teachers to take award bearing courses, such as diploma and master's degree courses, that will enable them to access academic research on gender and education? If schools succeed in this, such teachers can then take a lead in critically thinking about the research, draw the attention of their colleagues to it and then work together to change and develop their own practice to the benefit of their pupils. It would be a significant item in the School Improvement Plan and in-service training days could be allocated for it. Governors would have to earmark funding to ensure it started on a solid foundation, but it could develop into an important piece of school-based action research that could draw on the work being done in other parts of the country and which would attract funding from the Department for Education and Skills or other sources.

These are just some of the exciting possibilities that could arise from this work. I hope that others can find the same excitement and

pleasure that I have in developing their own research projects on gender issues. Perhaps some of them will become EdD students.

Life as an EdD Doctoral Research Student

This research project has dominated my life for several years but it has given me the impetus to look for and read the research literature relevant to it. In the process I have also found other interesting work, not related to this project but relevant to my every day work in school. I chose to focus on design and technology, not because it was an interest of mine but because I felt inadequate teaching the subject and wanted to know more about it. The field work I did was essential to this project, but it has also provided much for me to reflect on when considering the work of my own school. So much of what I have read and done has informed my teaching as well as my research study. I hope that I have become a better teacher and headteacher as I have developed as a student and researcher.

In Chapter 3 I described some of the struggles I had coping with the steep learning curve that I had to climb to achieve this piece of work. It has been difficult at times, but I have never thought of giving up because of the support and encouragement of those around me. The Open University has provided excellent support, in the early stages with the course file and throughout with the residential weekends, the resources available on FirstClass and the library/ internet resources. In addition I have used the libraries at the University of the West of England, the University of Exeter and the University of Bath and I now have quite a good academic library of my own. I would not have been able to reach this point in this dissertation without a great deal of help from my family and friends. My wife has become resigned to evenings and weekends spent alone or with friends. Children and grandchildren have not seen as much of me as any of us would have liked. Holidays away have been planned so that there was time for reading and writing as well as sight-seeing and adventures. The rest

of the school holidays have divided between work at school and work on this project. I have tried to continue to do my share of the domestic tasks but know I that I have not always succeeded in this. Despite this, my wife has encouraged me throughout the years it has taken. Without her it would have been much more difficult, if not impossible. On top of all that she kindly proof-read the final version for me.

Thanks are also due to the headteacher, staff and children of St Mark's School who went out of their way to be helpful. Without them there would be no research project to write about.

The colleagues at my own school also have been very positive about this work and have listened politely to me droning on about the issues in this study and shared in my excitement about how we can use it to make our school a better place for all the children. I hope that it has informed their teaching and given them thoughts about organising their classes and encouraging their pupils to be themselves.

Finally I must thank my patient and understanding supervisor who has been positive and encouraging throughout.

Appendix A

St Mark's C.E. V.A. Primary School, Fordminster

EQUAL OPPORTUNITIES POLICY

Rationale

Our intention is to enable all children to reach their full potential and to ensure equality of access to a broad and balanced curriculum. However, we recognise that the issue of Equal Opportunities has been developed because of the underlying inequalities that have been present in society in general. This in turn means that, in order to fulfil our aims, we need to take more positive action to counterbalance the inequalities within society and the world at large, and we need to be aware of the ways we ourselves may contribute to those inequalities.

There are many categories in which inequality operates, but we wish to focus on the key categories of gender ethnicity, religious belief, and disability, with the intention of reviewing and updating this policy on a regular basis and considering extending the categories to include, for example, sexual identity and age.

It is important to state that we have developed this policy collectively as a whole staff with significant involvement of the pupils. It has been recognised that such a policy can only be practised in a community and environment where all members understand, and have some part in negotiating, the codes by which it will operate. Fundamental to equality of opportunity is real and meaningful opportunity to make policy.

Aims

(a) To create an atmosphere in the school within which prejudice, discrimination and stereotyping of all kinds can be challenged and eliminated.

(b) To increase knowledge and understanding of issues relating to Equal Opportunities.

(c) To prepare pupils for life in a multicultural and pluralistic society.

(d) To develop a positive and caring attitude towards people of all communities.

(e) To promote positive images and expectations.

(f) To work towards equality of outcome as a measure of success.

Objectives

1 Management and Organisation

(i) To review all policies to ensure that each area, whether a whole school issue or a curriculum subject, takes account of the specific ways in which Equal Opportunities applies.

(ii) To monitor academic achievement by analysing SATs results and Edinburgh Reading scores by sex.

2 Ethos

(i) To ensure DISPLAYS around the school reflect a variety of positive images which are free from stereotyping associated with gender, race or physical disability.

(ii) To plan a programme of ASSEMBLIES which includes opportunities to challenge prejudice, question stereotyping and enhance understanding of our multicultural and pluralistic society.

(iii) To ensure that all assemblies are free from messages or language which undermines principles of tolerance or understanding.

(iv) To encourage adults from a broad spectrum of society to visit this school, particularly to demonstrate ROLE MODELS which are non-traditional for their sex, ethnicity or disability.

(v) To devise schemes of PLAYGROUND use which avoid domination of space by any particular group.

(vi) To provide training and support in order to ensure that playtime supervisors uphold the principles of Equal Opportunities in their work with children.

(vii) To include in the school's BEHAVIOUR Policy a specific reference to the avoidance of sexual or racial harassment and abuse, together with clearly understood procedures for dealing with any occurrences.

(viii) To ensure that SANCTIONS used in the school are the same for boys and girls and applied equally.

(ix) To encourage an understanding of the ways in which LANGUAGE can be used to stereotype and undermine confidence.

(x) To make clear that sexist and racist abuse is unacceptable.

(xi) To ensure that school PUBLICATIONS reflect the commitment to Equal Opportunities and are free from gender or cultural bias.

(xii) To provide ACCESS throughout the school site for wheelchair users and people with other disabilities, as resources allow.

(xiii) To encourage and develop positive links with the local COMMUNITY.

(xiv) To make all visitors feel welcome.

3 **Classroom Practice and Delivery**

(i) To ensure equal access to resources, equipment and toys.

(ii) To take steps to build the skills and confidence of children in areas where they may traditionally be lacking in confidence, eg dance or sewing for boys, football or construction for girls.

(iii) To ensure equal opportunities for talking and listening in whole class discussion, group work and paired work.

(iv) To divide teacher time equitably between girls and boys.

(v) To create an environment in which cooperation is central and in which children will work in a range of grouping contexts (single or mixed sex, mixed ability, random or compatible) comfortably and with purpose.

(vi) To teach children to skills to resolve conflicts and become assertive.

4 *Curriculum Planning and Design*

(i) To review the taught curriculum and actively seek opportunities to address the issues of equal opportunities.

(ii) To ensure that multicultural issues are not presented in tokenistic way.

(iii) To be aware of, and challenge, bias and stereotypical viewpoints within our teaching and language, eg only presenting images of Africa or India as poor and rural.

(iv) To draw on examples from many cultural traditions and recognise Britain as having a diverse cultural background.

(v) To help children explore the idea of 'stereotyping' in order that they can make more informed choices in relation to their identity (ie gender, ethnic or cultural background, disability).

(vi) To be aware of the balance and roles from a variety of cultural backgrounds, when choosing historical figures

or artists', composers', authors' work etc as a focus for a curriculum area.

5 *Assessment*

(i) To monitor assessment procedures to ensure that they are not distorted by stereotyped attitudes and expectations.

6 *Resources*

(i) To prepare and select resources which are free from cultural or gender bias, wherever possible.

(ii) Where their use is unavoidable, to employ biased resources as a means of provoking discussion of Equal Opportunities issues.

Appendix B

St Mark's CE VA Primary School, Fordminster

EQUAL OPPORTUNITIES POLICY: PERSONNEL

Rationale

Treating staff in a fair and equitable manner engenders confidence and security and encourages staff to perform to the best of their ability for the benefit of the school and its pupils.

The provision of equality of opportunity for staff is also a demonstration to pupils of the school's commitment to fairness and equity.

This policy recognises the school's responsibilities in respect of equal opportunities legislation, in particular, the Sex Discrimination Act 1975 and the Race Relations Act 1976.

Aims

(a) To ensure that no employee or job applicant receives less favourable treatment than another on the grounds of sex, marital status, ethnicity, disability, sexual identity, age or political or religious belief.

(b) To ensure that objective, job-related criteria apply to all the school's employment policies, particularly recruitment and selection.

(c) To redress patterns of inequality by adopting measures of positive action towards people from groups which have traditionally experienced disadvantage.

Objectives

(a) Recruitment

To develop procedures which avoid breaches of equal opportunities legislation and which aim:

- to ensure the maximum level of objectivity in the selection process;
- to eliminate prejudice based on commonly held stereotypes;
- to leave all candidates feeling they have been dealt with fairly;
- to allow for the encouragement of applications from candidates who sex or ethnicity is under-represented.

(b) Staff Development

- To provide opportunities for all staff and governors to receive appropriate training, consistent with their duties, responsibilities and aspirations.
- To ensure that support is available for female staff seeking to develop into senior managerial posts.

(c) Disability

- To adopt positive procedures towards the appointment of people with disabilities, including pre-interviews and adaptations to equipment.
- To provide access throughout the school site for wheelchair users and people with other disabilities, as resources allow.

(d) Maternity

- To encourage a response to maternity which recognises the rights of women to have children and the duty of the school to provide appropriate support.
- To adopt procedures for dealing with staff maternity which:
    - ensure the provision of correct and timely information about statutory and contractual rights, responsibilities and payment;
    - support female staff throughout pregnancy;
    - encourage staff actively to consider the option of returning to work;

- provide a flexible scheme for returners which takes into account the needs of the mother as well as the needs of the school;
- include consideration of paternity leave, adoption leave and leave for carers.

(e) Job-Sharing

- To support the practice of job-sharing except in situations where it would present unacceptable detriment to the ability of the school to meet its aims and objectives.
- To adopt procedures which set out clearly the rights and responsibilities of managers and staff. These should allow for the maximum degree of negotiation between potential job-sharers and managers about the most appropriate arrangements.

(f) Harassment

- To ensure that all staff have protection from harassment, particularly when associated with their sex, ethnicity, disability or sexual identity.
- To adopt a statement on harassment which clarifies the scope and definition of unacceptable behaviour and lays down remedies which will be applied by the school, including disciplinary action where appropriate.

Dissemination and Review

All staff will be provided with a copy of this policy. The procedures and codes which support this policy will be kept in the Staff Handbook.

A training session will be held for all staff to disseminate the Staff Handbook. It will include a focus on equal opportunities.

Procedures will be put in place by the Deputy Headteacher to monitor this policy. The policy will be reviewed by a group convened

by the Deputy Headteacher. This process will include wide consultation with staff and governors.

Appendix C

St Mark's CE VA Primary School, Fordminster
Design and Technology Policy Statement

Introduction

Design and Technology forms an essential part of the National Curriculum which is to be taught at Key Stage 1 and Key Stage 2.

The statutory order consists of two main sections:

(1) Designing and making Skills

(2) Knowledge and Understanding.

This policy is intended to be a clear guide to teachers, senior staff, governors and outside agencies as to the way in which we fulfil the statutory orders. It was drawn up by the D&T co-ordinators of the school in accordance with St Mark's School's guidance on policy writing and development, in consultation with staff, and with the aid of the National Curriculum document and the Curriculum and Qualifications Agency publications: Expectations in D&T at Key Stages 1 and 2.

The responsibility for implementing this policy is intended to be first and foremost that of the teachers of this school, supported by the D&T co-ordinators, senior staff, and the governing body.

It will be due for review in the Autumn of 2001, when it will be looked at by the D&T co-ordinators who will amend the policy content and wording if necessary.

Children with D&T capability are able to recognise and explore people's needs and wants, develop ideas about how these might be met and develop products that (might) meet those needs. In doing this, they draw on a developing repertoire of skills and knowledge, which will include:

- designing skills
- making skills
- knowledge and understanding of the materials and components that could be used
- knowledge and understanding of mechanisms
- control systems that could be used
- knowledge and understanding of existing product that can provide starting points and ideas
- knowledge and understanding of health and safety (risk assessment), quality, and appropriate vocabulary.

Design and Technology activities can be identified as three essential types:

- investigating, disassembling and evaluating simple products (1c)
- focused practical tasks (1b)
- designing and making assignments (1a).

At St Mark's School design and technology activities take place either as stand-alone units of work or as parts of ongoing topic work linking in with other subject areas.

In a year, activities will comprise of designing and making assignments (1a), focused practical tasks (1b) and evaluating simple products (1c) or a combination of the above.

At Key Stage 1, it is expected that children will spend 36 hours each year on Design and Technology tasks. This is extended to 45 hours per year in Key Stage 2.

There will no more than three projects which incorporate all three of the aforementioned D&T elements (1a, 1b, 1c) in any one year. Activities have been assigned to teachers in consultation with them which ensure that coverage of the main areas in D&T is achieved across both key stages. The activities have been selected so that

progression is achieved throughout the school. They can be viewed in the school's long term D&T planning/ scheme of work.

The main areas covered are:

- electrical control
- mechanisms
- structures
- food
- textiles
- mouldable materials.

In Reception, children are given the opportunities to select appropriate materials for D&T activities, develop making skills, and set up role play areas/ situations and experience structured play.

Year 1 children are introduced to a variety of materials and tools, and are given opportunities to develop awareness of designs, and knowledge and understanding of D&T. These aspects of D&T are continuously developed and refined throughout Key Stages 1 and 2.

Children are given the opportunity to work with a wide variety of materials including food, textiles, sheet materials (stiff and flexible), reclaimed materials and construction kits (electrical and mechanical). D&T activities will be undertaken by individuals, pairs, or in small group situations. Children are given equal opportunities regardless of sex or ability. Teachers modify activities in order to ensure that all children are granted equal access to D&T at their own particular level.

D&T activities are resourced by the individual class teacher, key stage heads and by the two D&T co-ordinators. Specialist resources will be stored in the design and technology cupboard. When consumables are running low, it is important to inform the D&T co-ordinators so they can be replaced. It is the teacher's responsibility to

ensure that any breakages are reported to the D&T co-ordinators and that materials are used as economically as possible.

Children's progress and attainment in D&T will be monitored by the subject co-ordinators who will keep a close check on work done by each year group. It will be expected that each year group will have three samples of work looked at from one of the units of work completed in a year. These will be comprised of work from a high, medium and low attaining child in the particular area of D&T. The results of the monitoring activity will be evaluated by the D&T co-ordinators who will report back findings for consideration by staff and governors.

Expectation targets for Design and technology in the school will be set using the criteria and examples laid out in the Curriculum and Qualifications Agency document: Expectations in D&T at Key Stages 1 & 2, a copy of which will be given to each class teacher.

Appendix D

From: "Feminist Methodology: Challenges and Choices" by Caroline Ramazanoglu with Janet Holland, (2002) London, Sage, page 7.

The characteristics of the feminism that is the focus of this book.

1. *Feminism is diverse and decentred.* There is no political centre to provide an authoritative definition of common goals and strategies for liberation. So there is no ruling on what does or does not constitute feminist methodology.
2. *Feminism is exclusionary.* Despite its diversity, any definition of feminism excludes 'non-feminism', or 'not-quite feminism', thus exposing fragmentation among feminists and divisions between women. This leaves as problematic who (if anyone) has the power to define boundaries for whom, and whether, or how, feminists can speak for women.
3. *Feminism implies a unified subject.* Women can only constitute the subject of feminism if they share a gendered social position. Feminism, therefore, requires some concept of a community of women who really exist. This raises the question of whether 'women' (and so 'men') are a real collectivity with political interests in common, rather than a variable social category.
4. *Feminism entails some claim to common interests between women.* Attempts to define feminism and its goals in some neutral way encounter real divisions of political interest, and so differing experiences of power, inequality and injustice between women. Any specific goals of social transformation can be very actively contested. Gender cannot be separated in practice from other social relationships, including those that empower and privilege some women over others. Nevertheless, feminism addresses women across their social

differences, on the grounds that common interests can be found wherever gender relations are unjust. If women really have nothing in common, and no gendered inequalities or injustices exist, the rationale for feminism disappears.

5. *Feminism implies a case for emancipation.* Feminism can only be justified where gender relations are unjust/oppressive, and people are able to choose to change them. Feminist claims to knowledge of gendered lives carry dreams of resistance, agency and emancipation across social divisions and the complexities of social existence. But emancipation also raises numerous problems about how change for the better is conceived, by whom, for whom and why.

Appendix E

Some examples of the questions that I asked in the interviews I conducted.

Because the interviews were semi-structured, this is not a complete list of all the questions that I asked, but is included to give a flavour of the main questions that I asked in my interviews with the children. Each of these would be followed by several supplementary questions to clarify what had been said, to develop ideas, to give others a chance to speak or to encourage the children to give examples. Each interview began with me introducing myself. I explained that I was interested in design and technology and wondered what they thought about it. I showed them the small tape recorder I was using and told them that they did not have to stay if they did not want to. I explained that they were free to return to their classroom at any time. A few days after the interviews each child was given a copy of the tape.

- When you think of design and technology, what sorts of things do you think of? What does it mean to you?

- Tell me about some of the projects you've done in design and technology.

- What were the things you enjoyed most? Why was that?

- What were the things that you didn't enjoy as much? Why was that?

- What use do you think these skills will be to you in the future?

- Thinking about design and technology still, do you think there are any activities that are for girls that different from boys' activities (and vice versa)? What makes you think that?

- How do you feel about doing design and technology at the secondary school?

- When your parents were at school the boys probably did woodwork and metalwork and the girls probably did needlework and cookery. How do you feel about that?

- Who does the sewing (woodworking) in your house?

Appendix F

Classroom Observations

When I was in the classroom at St Mark's watching the teacher and pupils at work I did not use any formal system in my observations other than to record the time of each note that I made.

However, looking back over my notes I find that these are the types of events that I recorded.

- What the teacher was doing and how the children were arranged; e.g. in normal class seating, in groups, moving around.
- An explanation of the task that has been set.
- What individual or groups of children were doing.
- How the children spoke to each other, and remarks that seemed significant at the time.
- How the children used their bodies whilst using the equipment.
- Instructions from the teacher to the class (or individuals) and the pupils' reactions.
- How the pupils in a group collaborated.
- How they set about their tasks.
- Children's reactions to successes and problems in their work.
- Examples of themes and images that the pupils used.
- Examples of off-task activity.
- How they cleared up and got ready for the next lesson.

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